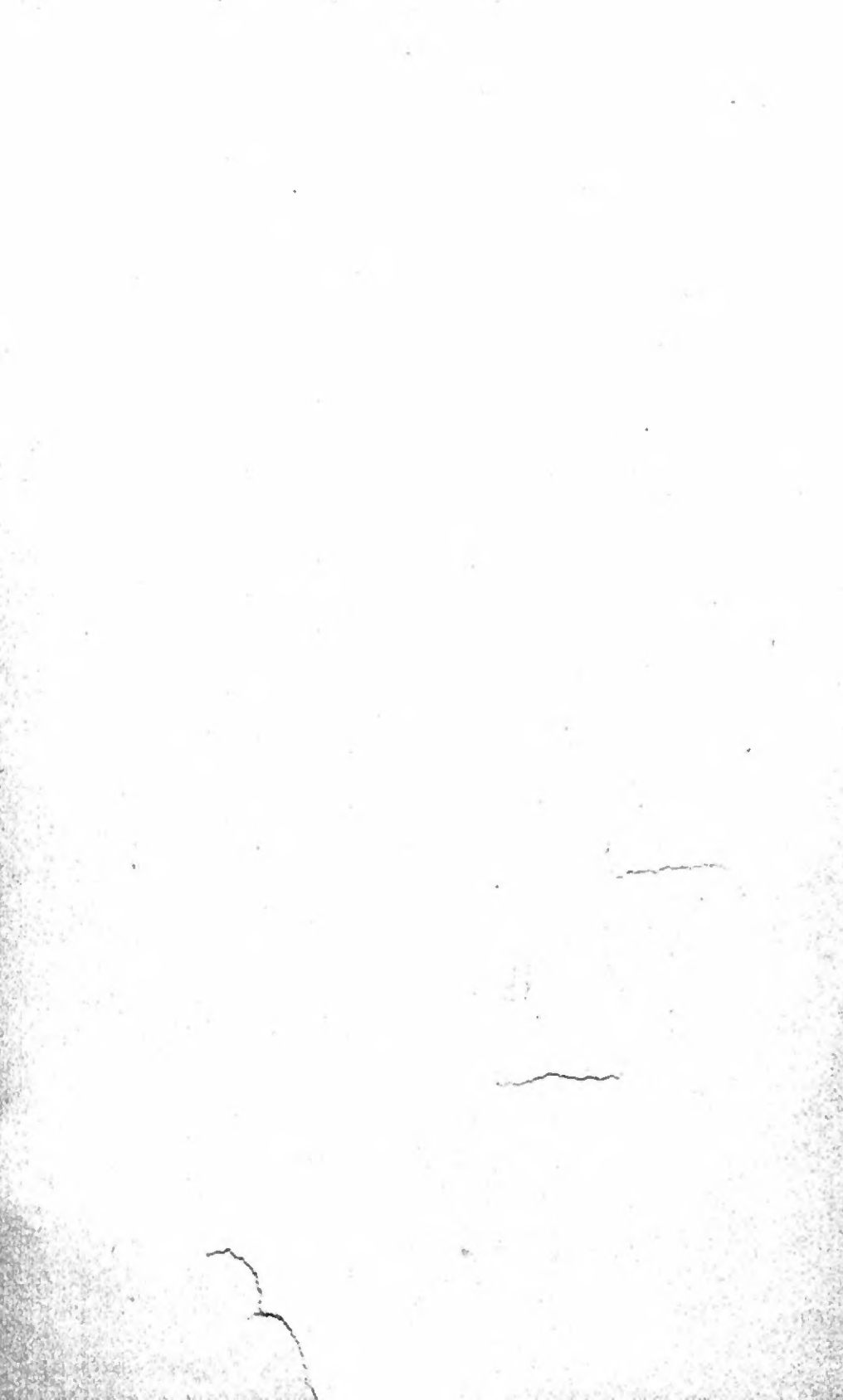


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OF THE

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EDITED BY

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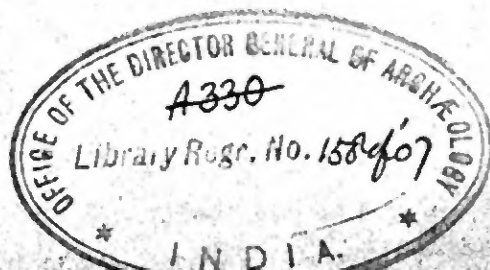
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FIRST HALF.

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JOURNAL

OF THE

AMERICAN ORIENTAL SOCIETY.

The Pahlavi Text of Yasna ix. 49-103, edited with the collation of all the MSS., also deciphered.—By Rev. LAWRENCE MILLS, D.D., Professor in the University of Oxford.

FOR an account of the MSS. used see the number of the Journal of the R. Asiatic Society for July, 1900, pp. 511-516. I should add here that my collation of M., though very carefully made in 1891, has been subjected to much abrasion through use, while the notes are here added as a merely supernumerary item; they were not originally intended for citation, and should not be considered exhaustive. The attention of searchers is especially called to the fact that the Pahl. trlr. occasionally errs radically, as well as often, in the matter of form. As may be seen from my translation of Y. ix. in S.B.E., xxxi., one especial motive in undertaking this laborious and harassing work has been the desire to destroy the false impression that the authority of the traditional documents is absolute. An exaggerated reliance upon them is nearly as dangerous as the neglect of them. As one fairly said of my former well meant studies on the Gâthas (together with a close reproduction of the original in the light of the critical school), I endeavour to present also the 'Werth und Unwerth der Tradition'; and it is to the last degree necessary that we should neither exaggerate the one nor the other. In the interest of statistics I should say that I have omitted to record

¹ With the exception of one which is a replica. See the introductory remarks cited above.

all the occurrences of final -ō; time, not to say patience, having failed me. I should add that I regard this with regret, as this seeming so trivial mark would be interesting, if we could prove that it represented a letter -ō, or what not. So far, I may say that I fear it is a mere mechanical division mark, occurring without any regular law whatever. It is almost a pity that we could not entirely neglect it. But it is better to retain it for the present; some reason may yet be given for it. It is sometimes used before a termination like the *avagraha*. I had intended to cite the variations as being those from the reading of our Oxford Codex, called D.J. by me in the *Gāthas* first even so far back as 1881, but later called J2; it seemed to me, however, to be rather an ungracious act to avoid placing the edition of our venerable first editor in that position. This is also more convenient for readers, as the printed edition is more accessible than the photographed one; and also reduces the amount of annotation. [This collated edition is an attempt to meet the most crying need in connection with the subject. I have used the old transliteration of the glossaries for practical reasons.]

The Attributes of Haoma.

Y. ix. 49.¹ *shapīr hōm ī hūdehāk² [aīgh pavan frāirūnōih³ yebabūnd⁴ yekavīmūnih] ī rāstō⁵ dehāk⁶ [aīgh⁷ mindavam⁸ avō⁹ valman¹⁰ yehabūnih¹¹ ī ghal¹² avūyadō¹³ yehabūntanō.¹⁴*

(50) *vēh¹ -dehāk¹¹ [aīgh mindavam ī shapīr barā yehabūnih] ī beshāzīnīdār¹² [aīgh mindavam ī¹⁵ avō⁹ bēshāzīnīb¹³].*

¹ D.J. ins. va.

² D. *hūdehāk*, so also Parsi-Pers. MS. *hū-debāk* (so); K.⁵, M. *-dehak*; Ner. *sudānam*; D.J. *dehak*.

³ So D.J.

⁴ So D.; D.J., etc. *dādō*, so also the Parsi-Pers. MS.

⁵ So D.J.; D., and the Parsi-Pers. MS.

⁶ D. om *aīgh*.

⁷ So D.J., D. *mindavam*; so the Parsi-Pers. MS. with traditional 'mandūm,' 'mindavam'; K.³ (Sp.) *chiz* (or 'chish for *chiz*' (N. B.)).

⁸ D.J. has *ānō* (or means 'hū', with *dehāk* following instead of *dehī*(?)); D. may be *ānō*; K.⁵ (Sp.) *valman yehabūnih* Pers. *avō-* translating 'ān ū *dehī*.'

⁹ So D.J., D.(?) and Pers. MS.; K.⁵ *valman*.

¹⁰ So D.J., D.

¹¹ So D.(?); D.J. *dehak*.

¹² So D.J., D.; K.⁵ (Sp.) rather full characters.

¹³ D. may ins. I or I.

(51) hñ-kerpō hōmanih [aīghat kerpō nēvak] hñ-kūmakō hōmanih' [aīghatō² avāyastō³ I⁴ frātūnō].

(52) pīrūzkar I zardō⁴-gūnō⁵ I narmtāk [aīgh tāk⁶ I lak narm].

(53) amatatō⁶ vashtamūnd pāhlāmīh avō rūbān' yehabūnih an-bārīktūm⁶ hōmanīh, [aīgh anbār I rūbānō pavan lak shapīr shāy-adō⁶ kardānō maman garōdmānīkīh pavan lak yehevūnād¹⁰].

Appeals.

(54) barā¹¹ lak zarīnō¹² mādīšnō¹³ yemalelūn¹⁴, [mindavam I¹⁵ am I¹⁶ pavan farīhang yemalelūn aīgham danāktīh¹⁷ yehevūnād¹⁸].

(55) barā amāvandīh va¹⁹ barā¹⁹ pīrūzkarīh afam²⁰ yehevūnādō.

(56) barā drūstīh va²¹ barā bēshāzishnīh.²²

¹ So D.J., D.; K.⁵ (Sp.) may have meant 'haē.'

² So D.J.

³ D.J. ins. I.

⁴ So M.: D.J. zarīnō va gūnō I (sic), but the sign for va is probably an oversight. D. has va zarīnō.

⁵ D.J. seems vad (sic); Pers. MS. tris. 'tāk.'

⁶ So D.J.

⁷ So D.

⁸ D.J., D. om. haē, or what it may be. Was it 'gās'?; better call it a repeated 'thou art.' So D.J., D.; K.⁵ (Sp.) bēd.

⁹ One would think that the form in D.J. should be deciphered as khshayađō reproducing an original 'kh;' or else it would seem to be āshayađō (sic); otherwise I should say that it must be irrational.

¹⁰ So D.J., D.; K.⁵ (Sp.) bēd.

¹¹ So D.J., D., and see below for barā; K.⁵ (Sp.) pavan(?).

¹² D.J., D. exaggerate the signs, or ins. va(?).

¹³ D. marks the 'd.'

¹⁴ This mistake evidently arose from the accidental separation of yemalelūn and 'am' for yemalelūnam=mrūvē, see the am after mindavam; it would have been much better before it or both. Ner. was also misled; so the Parsi-Pers. MS. also; all divide and mistake the first sing. pres. for the second sing. imper., plus am = 'to me.'

¹⁵ D.J., D. have mindavam I am.

¹⁶ D.J. om I; D. has I.

¹⁷ So D.J., D.

¹⁸ D. -nēd.

¹⁹ D. ins. va barā; D.J., D. om. va or -ō.

²⁰ D.J. (and perhaps D.) afam; K.⁵ (Sp.) am.

²¹ So D.J., D.

²² So D.

(57) barā frādahishnih¹ va² barā³ vārishn⁴(?) dahishnih.

(58) barā aūjō ī harvispō tanō barā farzūnakih ī⁵ harvispō pēsīd⁶ [hōmand amat⁷ farjūm ī mindavām ī⁸ klavītūnēdō afash⁹ hamāī¹⁰ dānākīh paḍash¹¹].

(59) barā min¹² zak chīgūn dēn gēhānō¹³ *¹⁴ *¹⁵ kāmako¹⁶-khōdāī frāz sātūnd va¹⁷ bēsh tarvīnend¹⁸ *¹⁹ *²⁰ va drājō²¹ vānēnd²².

(60) barā min zak chīgūnō tarvīnāuī²³ harvispō²⁴ zak²⁵ bēshī-dārāuō²⁶ va²⁷ bēsh ī²⁸ min shedān²⁹ va³⁰ aushātūnō³¹ [ī³² buḍō³³].

¹ So K.³ (Sp.), M.; D.J., D. seem frādahanīh (or frādānīh) (sic?); I had first considered vardānō (dahishnih) as a later form of a causative(?) stem. D.J. has erasures, but seems to have decided for vārishnih (not vārdānīh); there is no escaping the ā in vār-.

² D. ins. va, or has irrational marks.

³ So I decipher, bringing to light the error (as I hold it to be) of the Pahlavi translator in seeing a form of vār (vr) instead of a form of vardh (vrđh); we might even read varishn-, notwithstanding the sign which represents ā, in vārishn, so in default of better; but the Parsi-Pers. MS. transliterates vārishn and translates accordingly; some have thought of 'vahrishn' (so).

⁴ D.J., D.(?) ins. I.

⁵ D.J. obscured by decay.

⁶ So D.; others mun.

⁷ So D. seems I.

⁸ Mf.? afash.

⁹ So D.J., M.; D. hamāk.

¹⁰ D. defaced.

¹¹ D.J. defaced by decay.

¹² D.J. ins. chīgūn, but seems to have cancelled it.

¹³ So D.

¹⁴ D. ins. va.

¹⁵ So D. tarvīnend(?), D.J. etc. tarvēnd.

¹⁶ There is, of course, the question whether we ought not to read these verbs tarvīnēnī, and vānēnī as first singular conj. imper., in view of the originals (see Ner., who was not misled); but sātūnd seems to call for a decipherment which recognizes the error; otherwise all the forms should be reproduced as first personals.

¹⁷ D.J. bleached out.

¹⁸ So K.³ (Sp.); D.J., D. tarvēnd? or tarvēnī.

¹⁹ So D.J., D. ō.

²⁰ D.J. om. -ō (sic); D. om. zakō (some may well desire the statistics as to this still curious -ō; but patience has sometimes failed me).

²¹ So D.J., D. -ō.

²² D. ins. va.

²³ D.J., D. seem redundant.

²⁴ So D.J., K.³ (Sp.) marqūmān.

²⁵ So D. ins. ī.

²⁶ D.J., M. ins. va.

²⁷ So D.J. only.

(61) yātūkānō va parīkān¹ va² sāsārūn¹ va kīkūn¹ (kayakān, so better) va karpāu¹ hōmanḍ kīk (? kayak) va³ karpō¹ [zak mūn pavān mindavam i⁴ yazadānō kur⁵ va kōr¹].

(62) marich i dō-zang va² aharmōkōch i dō-zang va¹ gūrgich i chahār-zang.

(63) hēnōch⁶ i farākhū-ānik⁷ [aighshānō⁸ maradō kabad aīt mūn aētūnō yemalelūnēḍ aē¹⁰ hōmanḍ ānikshānō farākhū¹¹] mūn¹² pavān¹³ frīfārīh patēnd.

Prayer for Boons.

(64) denman mūn lak fratūm yān hōm i¹⁴ zaidēm¹⁵ (or 'zaid-yām' ¹⁶(?)) i dārāōsh zak i pāhlām ahvāuō i ahārūbānō i rūshanō i hamāi¹⁷ -hvārīh.

(65) denman min lak dadīgar yān¹⁸ hōm i¹⁹ zaidēm (or '-yam?') i²⁰ dārāōsh dārūstō²¹ rūbisbnih i tanō.

(66) denman min lak²² sadīgar yān²³ hōm i²⁴ zaidēm (or '-yam?') i²⁵ dārāōsh dēr zivishnīh i²⁶ jānō.²⁷

¹ So D.

² So D.J.

³ So D.J., D. ins. va.

⁴ D.J., D. ins. i.

⁵ So D.J., D. and persi pers. MS.; others reverse the order, but see Ner.

⁶ So D.J.

⁷ D. has four strokes.

⁸ See the Zend text; D.J., D. have a superfluous stroke. D.J. may well be hāenōōch (sic, see the Zend).

⁹ So D.J.; D. seems farākhūō-ānik(?): K.² (Sp.) farākhūfnik? (sic), M. I think has Sp. + -ānik.

¹⁰ D.J., om. aē. so D.J.; M. has it in a different form.

¹¹ So D.J., D. ānikshān; K.³ (Sp.) pēshānik. D.J. has the preceding hōmand in the margin, but added by the original copyist with the same ink.

¹² D.J. worm-eaten. Notice the freedom of error of patēnd, also followed by Ner. though using a different form; see the Zend.

¹³ D.J. ins. i. and has zaidēm (or -yam) blotted out purposely(?).

¹⁴ So I think we should decipher in view of the original and the corresponding word in the inscriptions; but the Parsi-Pers. the proper translation as 'khāham.'

¹⁵ So D.J., M.; D. hamāk; K.⁴ (Sp.) hamā(?).

¹⁶ So D.J., D., M.

¹⁷ D.J., M. ins. i.

¹⁸ D. joins i to the preceding word, possibly meaning to express a conditional.

¹⁹ D.J. worm-eaten (final -ō, so D.).

²⁰ So D.J., D.

²¹ D.S. ins. i.

²² D. again joins to the preceding word.

²³ D. varies ziv- with (?) zā(y)-?; D. om. i.

²⁴ D.J. marks, however, as if it were gānō.

(67) denman min lak tasūm yān' hōm zaidēm (or '-yam?') ī¹ dūrāōsh chīgūnō min khvāstār va² amāvand va³ paḍikhvō frāz' sātūnānī⁴ pavan damīk madam bēsh turvinānī⁵ va drūjō vānēnī⁶ (or read vānānī, see below).

(68) denman min lak panjūm yānō hōm ī¹ zaidēm (or '-yam') ī² dūrāōsh³ chīgūn pīrūzkar vānūlār pavan kūshishuō frāzō sātūnānī⁴ pavan damīk madam⁵ bēsh tārvinānī⁶ va drūjō vānēnī.⁷

(69) denman min lak shashūm yān hōm zaidēm (or '-yam') ī¹ dūrāōsh aīgh levīnō min dūz² va levīnō min gadak³ va levīnō min gūrg khaditūnām⁴ [mādishū⁵ chārakō].⁶

¹ So D.J., M.

² D. again joins. Ner. is better here, apparently referring the word to Indian iṣirā, etc.

³ D.J., D. ins. va.

⁴ So D.J., D.

⁵ So D.J. (corrected from -und at first hand); but it marks 'd' instead of 'ī'; this, however, is almost universal with D.J. and the Parsi-Pers.; not so Ner., though, as often, he has sing. for plur.

⁶ D.J., D. again mark -ēnd; not so Ner.'s original, or if marked 'd' instead of 'ī' in -ānī, then it by no means misled him.

⁷ D.J., M., D. mark -ānd; not so Ner. ⁸ D.J. ins. ī.

⁹ D. again curiously joins to the preceding word; does he really mean zaidēm-ī (or -yam-ī); this must be considered.

¹⁰ D.J. has curiously dīraosha for dūraosha; and in one Zend MSS. K.⁴ the sign for long ū and that for long ī are indistinguishable; in fact it is very frequently thus in D.J.

¹¹ So D.J.; M. D. seems sātūnd; and D.J. marks 'd'; not so Ner.'s reading.

¹² D.J., D. om ī.

¹³ But D.J., D., as all other MSS., mark the word with a mark over 'ī,' indicating the false final 'd'; Ner. was not deceived by these mistaken signs (or were they added since his day?).

¹⁴ D. vānēnd; all MSS. again falsely mark a final 'd'; but see the original; Ner. does not, however, err.

¹⁵ D. joins (?) again to the preceding word.

¹⁶ So D. dūz; others zōhā; Parsi-Pers. translating dūzd of course.

¹⁷ So D.; see the original, also Ner.'s 'nṛcaṃsebhyaḥ' and the text of the Parsi-Pers. MS. 'gadah.'

¹⁸ So D.J., M. ?; K.⁵ (Sp.) khaditūnēm.

¹⁹ So D. and also the Parsi-Pers. MS. translating 'hunar; others (?) 'mānishn (?)' which seems senseless. At Y. x. 60 the form seems 'mādishnō.' I think the mistake 'mānishn' arose from some Persian text with imperfect diacritical signs, or simply from writing too long a stroke the letter 'd' in 'mād-.' Ner. omits the word here: but see him on Y. x. 60 with vidyām as usual (twice); so the Parsi-Pers. MS. there, translating 'hunar' and reading 'māishn', and not 'mānishn' (?sic).

²⁰ So D.J., D.

(70) al aigh levīnō khaditūnādō' levīnō min lamman min harvispōgūn' levīnō khaditūnam' [lī va hāvishtānō I lī].

The Gifts of Haoma.

(71) hōm valmanashān mūm arvand' hōmand' ashānō' zak ī farhākhtō' va' tvākshshāk vabdūnyen [sūsyā' afshānō' zavar¹⁰ va' aōjō khelkūnōdō'¹¹ [aratōshtrānō].

(72) hōm ī' āzātānō ich¹² barā yehabnūd' zak ī' rūshanō' beumau¹³ va' zak ī aharūbō farzand.¹⁴

(73) hōm valmanshān mūm katik¹⁵ pavan nask¹⁶ frāzō¹⁷ āmūkh-tishufh yetībūd [pavan āsrpatistānō¹⁸ karḍanō] ashānō¹⁹ afzānīkih va²⁰ farzānaklī khelkūnōdō'.²¹

¹ So D.J.

² D.J. harvispō. D.J. has the first min written over as doubtful; the correction itself seems later written over.

³ Ner. has častrimantaḥ nnd ačvān kshatriyāpām.

⁴ D. 'hōmōnd.'

⁵ So D.J., and it has a cancelled 'pavan.'

⁶ So D. and the indication of the Parsi-Pers. MS. which is, however, strictly in itself considered, erroneous with frāhtan. K.⁶ (Sp.), etc. have a marring stroke.

⁷ So D.J. ins. va. ⁸ So D.J., K.⁸ (Sp.); D. and the Parsi-Pers. MS. aspō.

⁹ So D.J.

¹⁰ So D. and Parsi-Pers. zavar; D.J., Sp. zavār.

¹¹ Parsi-Pers., D.J., M.? ins. va, or -ō.

¹² So D.J.; Ner. om. hero; but ins. 'varshatī' below.

¹³ D. ins. I.

¹⁴ D. seems āzerkhūntānich; so M.? the Parsi-Pers., but the latter translates as negative a-zāyandagān (so ?); D.J. etc. āzāqānō.

¹⁵ D.J. ins. va.

¹⁶ D.J. has va zak ārōdishnō, or ārūshānō(?); but I should think this 'ā' was a clerical mistake for the usual I, and made through haste; but see K.⁶ (Sp.) with which M. probably agrees, as in my careful collation of 1891, I marked no variation; om I.

¹⁷ So D. rūshan (see Ner.); others ārōdishn (sic).

¹⁸ Or barman.

¹⁹ D.J., D. va.

²⁰ M.? differs from Spiegel having 'fardand' (but intending to report the same meaning).

²¹ D.J. has k-t-k-lk with the second 'k,' or -?, struck out(?); not so the Parsi-Pers. Ner. translates grhashtāh reading 'kaḍakik' or 'kaḍak,' as I suppose; the Parsi-Pers. does not translate; see my S.B.E. xxxi. at the place. 'Katik as the katayō at the Pahlavi stage certainly favours a Zend form in the sense 'house-abiding,' 'sitting at home,' and I would now regard my former rendering as the alternative.

²² So D.J.; M.(?) differs from Spiegel; see Ner.'s 'naska-.'

²³ So D.J., though the ō stands apart; it cannot well be 'va.'

²⁴ So D.J.

²⁵ So D.J.

(74) hōm valmanshān mūn kanikō' hōmand va yetibānd dēr² agript³ [aigh lā saritānd yekavimūnd] ashān zak i' āshkārak⁴ zak i' rādo⁵ khelkūnēd⁶ [aigh shānō⁷ shāi barā pēdākīnēd afshānō tizō⁸ zerkhūnēdō⁹ va¹⁰ zak i' hūkhiradō¹¹ [hōmand amat avō¹² gabrā barā pēdākīnēd pavan jīmāk dēn kār yekavimūnēd].

A Punishment.

(75) hōm valmanshān mūn keresāik¹³ read keresā(n)ik (omitted nasalization; see keresānim).

¹ So. D.J., M.

² D.J., D. om i.

³ D.J. curiously mistakes for aērpat which has the same characters, and it adds 'istānō'; not so the Parsi-Pers. MS., nor Ner.

⁴ D. om i.

⁵ So D.J., D.

⁶ So D.

⁷ So D.J.

⁸ So M.

⁹ So D. D.J. is blurred purposely; Ner. strangely enough renders yācayitārāh; did he have a blurred MS., and was it D.J.? see his yācayāmi at 65, etc.=zaidēm (so).

¹⁰ D.J., D. ins. va.

¹¹ D.J., D. ins. i.

¹² So D.J., D.: D.J. ins. here division mark of the subsection (sic).

¹³ So D.J. avō (to the verb 'avō pēdā-') or ānō=valman; D. om.; some might prefer pēdākīnēd . . . yekavimūnēd.

¹⁴ I do not well see how we can avoid using the vowel and consonantal signs of the original in a case like this: at least it is convenient so to use them; cp. keresāspō. The Parsi-Pers. MS. has k-r-s-ā-k-i translating k-r-s-ā-i; so also D. k-r-l-s-ā-k-i-k; D.J. seems keresāihikō (sic?) or k-r-s-ā-sh-l-kō, possibly k-r-s-ā-ikō, the ā being doubled by mistake. Read M. keresāik, it has characters for k-r-s-ā-l-k, so K.¹ (Sp.) with slightly lengthened 'k'; see the original. The translators at first evidently attempted to transliterate; and their failure may well be due to the omission of a nasal sign in the original word. This nasal, let it be remembered, would be well represented in the Pahlavi merely by a perpendicular stroke. Or else, as so often, the sign of this nasalization has been lost. 'Keresā(n)I would represent the original word, while the 'k' (or 'ik') is the frequent terminal letter generally possessing adjective, or merely nominal force, and intended only to carry on the i of the im. Ner. reports the deeply interesting impression which prevailed among the Parsi-experts of his day that keresā(n)ik and its variants referred to the 'ecclesia'; that is to say, to the 'Christians'; see his tarçākādīnīh; cp. tarsā='christian'; D.J. ins. va or -ō.

hōmand¹ ashānō² barā³ min khūdayih nishānēdō⁴ mām rōstō
(or 'rōdūō') hōmand⁵ pavan khūdayih-kāmākīh⁶ [aigh pavan
khūdayih lātā yātūnd yekavīnūnd].

(76) aigh⁷ mām gūyēnd aigh lā lauman rāi akhar asravanakō⁸
pavan avar-hōshmurishnih pavan kāmākō dēu matā sātūnd
[lauman aētūō vabdūnūn⁹ min kardō i lauman yehevānēdō¹⁰
amat¹¹ la sātūnd¹²].

(77) zak i harvisp-gūn¹³ gārđih vānēdō barā harvisp-gūn¹⁴
gārđih makhitānēdō¹⁵ [pēsh¹⁶ pas¹⁷].

Hail to Haoma.

(78) nōvakō¹⁸ lak [aigh tanō i lak nōvak¹⁹ mađō²⁰ yekavi-
mūnēd] mām pavan zak i nafsman²¹ aōjō-kāmāk²² khūdāi
hōmanīh²³ hōm.

¹ D. hōmōnd as often. D.J. has ashānō, or ins. va.

² D. has curiously 'gabrā' for 'barā'; so the pers. MS. also, translating 'mard'; Ner. has nothing analogous.

³ Parsi-Pers. transliterates *nishānēd* and translates *nishēnd*. (barā) min . . . nishānēdō may mean 'restrain from,' 'cause to abate.'

⁴ So K.⁵ (Sp.); D.J., D. pavan kbūđāi (not impossible); see Ner.

⁵ So D. ins. aigh here.

⁶ D.J. seems 'asravanak, or asrūōk; why not read so far as possible in analogy with the Zend?

⁷ So I would read D.; others vabdūnam-i; but D. as it stands is of course 'vabdūnānd'; see the variant vabdūnam-I, K.⁸ (Sp.). Ner. does not render. M.⁹ has vabdūnēm; Mf.¹⁰ vabdūnānd-i? (so it seems); Pers. MS. translates 'kunand.' Why not vakhdūnānd?

⁸ So D.J.; K.⁹ (Sp.) bēd.

⁹ D.J. ins.; so also the Parsi-Pers. MS.; K.¹⁰ (Sp.) has amat . . . -ūnd (so, in fragments); but M. has no space.

¹⁰ So D.J.; M. seems -gun, but not -gūn; D.J. om foregoing i.

¹¹ D. ins. va or -ō; the 'n' of D.J. is somewhat separated from the ū; which fact bears upon the further question whether he means 'va' in certain places or 'ō.'

¹² So D.J.. D. pēsh pas; K.¹³ (Sp.) levīnō akhar.

¹³ So D.J.

¹⁴ D.J., so D. om. i.

¹⁵ D. J. om kāmāk here; see the Zend text.

¹⁶ N.B. aōjō-kāmāk not in M. but in K.¹⁷ (Sp.); [and yet M. is reported as a copy of K.¹⁸, the Pahl. trl. not having been examined. It is a modified copy (sic)].

¹⁷ D.J. ins. va or -ō.

¹⁸ D. hōmōnih; D.J. bōmanīh (so).

[aighat aōjō pavan zak kār¹ zakatō² avāyaḍō³ * * at tūbānō⁴ dāshthanō].

(79) nēvak lak mūn dēn khavītūnih⁵ kabad gōbīshnō ī rāstō [ī frārūnō mamau⁶ aītō rāstō lā (sic?; read rāf⁷) frārūnō⁸ (kā na vaca arshukhdhā¹⁰].

(80) nēvak lak mūn lā¹¹ frāz¹² min¹³ hampūrsakīh¹⁴ zak ī arē-shukhtō¹⁵ gōbīshnō va¹⁶ hampūrsak-haē¹⁷ [aigh mindavanu lā yemalēlūnāī¹⁸ ī aūharuazd dēn hampūrsakīh lā¹⁹ gūftō].

(81) frāz lak zak ī²⁰ aūharuazd bārdō paravand aīviyāo(n)g-hanō²¹ (not 'aīviyāggīshnō' (so?))²² star pēsīdō ī minavadān²³

¹ D.J. irreg. character for 'ā' one stroke too much; it may be accidental.

² So D.J.

³ D.J. may mean (?) zītō; this zītō (?) would be written much like zakat as sometimes written.

⁴ D. ins. va or -ō.

⁵ D. tūbān; D.J., D. om. Sp.'s f.

⁶ D.J. dānāk, om. aē or -īh, K.⁶ (Sp.) khavītūnih; D. seems khavītūn with a separated '-ih.'

⁷ D.J., D. manan; K.⁶ (Sp.) mūn.

⁸ Ner.'s yena saves the sentence from the senseless lā; so the MSS. should be read rāī, or otherwise relieved and discounted (the Parsi-Pers. MS. also has 'lā' = 'nah.'). D. may insert ī before lā.

⁹ M. -ōk; others frārūnō.

¹⁰ D.J. arshukhdhā; Zend characters within the brackets.

¹¹ D.J. om. mln here, ins. after frāz.

¹² I think frāz was erroneously motived by 'pairi;' yet Ner. seems to have understood frāz min as equalling rte.

¹³ D.J., D., M. (N.B.) have ham(pūrsakīh), and so the Pers. MS. translates at least. Spiegel alone has pūrsakīh; but see Ner.; this trifle shows that M. is not a rigidly exact transcript of K.⁶ according to Spiegel. D.J.'s fh is not clear, but over-written; looks like -ih.

¹⁴ But for the original Zend text I should emend to arsh-; the word seems to be a hybrid; D.J. adds gās. or -īhā.

¹⁵ Ihā as pl.(?) and as adverbial seem each to be suspicious. On the other hand, to see a fully conscious 2d sg. purslyāih (so, or yāē?) is doubtful as immediately following the hampūrsakīh. The most prudent view is to see a Pāzand haē. 'Thou wouldst be of a truthful speech and questioning;' D.J. om. the va before it.

¹⁶ So M., or -īh; others -ih.

¹⁷ D. erroneously rāī.

¹⁸ D. om. f.

¹⁹ So D. ins. (?); evidently an attempt at a transliteration; the 'o' of aīviyāo- is in Persian form somewhat similar to Persian ō, or ū, otherwise read -yākgānōīh (sic). Ner. reads the same text, attempting only a transliteration aīvianghanatām (S. reading aīvi-), though he translates aīviyāstō in 82 as āvēštīh; the reading is needed; see the Zend text. The Parsi-Pers. translates (?), or imitates ēvāngan; while at 82 it refrains from the translation of the related word.

²⁰ So D.J.

takhshīdō' shapīr² dēnō ī mā(zda)yastānō³ [afash aīviyā(ūg)han-ōih (sic)⁴ hanā aīgh ehīgānō kūstik levatman gabrū khadū-kar-ḍakō⁵ dēnōich ī levatinan hōm aētūnō⁶ khadū-karḍak afash kha-dū-karḍakōih⁷ aītō⁸ hanā⁹ aīgh vad hōm lā vashtamūnōdō¹⁰ pavan dēnō astābūnō lā ychevānōdō hōm¹¹ vashtamūnōdō kār dēn (ā)yazishn¹²].

(82) pavan zak hōmnyih¹³ aīviyāstō¹⁴ pavan hālistō madam ī¹⁵ girānō [āmat tamman rōsto¹⁶ yekavimūnih afatō¹⁷ deuman khadū-karḍakih aētūnō¹⁸ vad avō zak ī dirīz madam sātūnīshnih [vad tūnō ī pasīnō yekavimūnih] pavan mānsar¹⁹ [alghat dēn yazishnō²⁰ kār ghal farmāyēnd²¹].

¹ Others might prefer 'tāshīdō' or 'tukshīdō'; D.J. has a superfluous sign which is, I think, accidental.

² So D.J., D.; others vēh.

³ So D.J. seems. I have little doubt but that mā (sic) is for 'mazd,' as the same 'ma' is in aūharms(zd).

⁴ So D.; the Parsi-Pers. MS. transliterates biyūkgāni (so here), meaning and explaining ēvānghān (thus approximately), while just above it seems to have aēblyākgān translated egein hy evānghān. D.J. has superfluous signs for the first 'ī.' 'aīyv.' (?)

⁵ So D. D.J. has a superfluous and accidental mark between 'k' and 'ar' in karḍak.

⁶ D. ins. aētūnō; or is it a later interpolation?

⁷ D. ins. aītō.

⁸ D. hanā; others eē.

⁹ D., Mf. om. mū in the middle of the word.

¹⁰ D.J. has a word struck out (not Spiegel's form); ins. veshtamūnōdō; D. has an abortive word as above for vashtamūnōdō, or it may mean hom shedūtō kār dēn āyazishn; but there are no signs of shedūtō or yātūnōdō in Ner.; D.J. hōm vashtamūnōdō kār dēn yazishn.

¹¹ D. seems āyazishnō. D.J. yazishnō; but space seems left.

¹² D. hōmōnih; M. may be hōmanyih; so D.J.

¹³ eīviyākstō (sic), again, or is the 'k' Persian ō (similar sign), see on 81? Strange to say, D.J. has the same thing, and the Parsi-Pers. MS. as well. Is it the suffix -k which, like the -ō, has found its way into the interior of the word as a sign of the division of syllables?; cp. the avagraha. As -k appears in vohū -k even at the end of a word, it may here appear at the end of a syllable? or again, can it point to a suspected form of yūj, 'to yoke on?' or is it the sign merely of an echo of the 'ng' in 81?

¹⁴ D. ins. ī.

¹⁵ Or rōdīdō (?)

¹⁶ So D.J. afatō.

¹⁷ D.J., D. have aētūn; so Parsi-Pers. MS.; Sp. eit.

¹⁸ Or mānthar (?)

¹⁹ Mf. again āyazishn.

²⁰ So D.J.; M. seems farāyēnd (?), i. e. om. 'm,' (?) accidental; Ner. gives no sign of this; and the Parsi-Pers. has farmāyēnd (so).

(83) hōm mūn mānpat¹ hōmanih² mūn vīspat³ hōmanih vā⁴
mūn zandpatō⁵ hōmanih va dahyūpat⁶ hōmanih⁷ [aīghat mīua-
vadīhā haināk⁸ patīh] va⁹ afzūnikīh va ākāspatō¹⁰ hōmanih¹¹
[aīghatō¹² barā tūbānō¹³ yehābūntanō¹⁴].

Deprecations.

(84) anūvandīh ī¹⁵ lak va¹⁶ pīrūzkarīh avō denman ī¹⁶ li tanō
ī¹⁵ madam pavan afrīnō¹⁷ va¹⁸ padīkhvīhīh ī¹⁹ pārdābazīshnīh²⁰
[khvāstak ī²¹ mūn nūvakīh ī²² kabed azash].

(85) barā mīu zak ī lanman²³ bēshīdārānō bēsh va²⁴ barā mīn-
ishnō²⁵ larāich yedrūnānō²⁶ ī²⁷ girān²⁸ mān²⁹ [khudāyīh].

¹ So. D.J., D.; K.³ (Sp.) mānpatān, so also the Parsi-Pers. here.

² D. hōmōnih.

³ So D.J.; K.⁴ (Sp.) -patānō; M. might be vīshpatān (so).

⁴ D.J. ins. va.

⁵ So D.J. zandpat but mechanically divided 'zand pat' (elo.); others zandpatān; not so Ner.'s orig.

⁶ D. might be dahyūpat (?); M. dahyūpatān (sic).

⁷ So D., M.; D.J. hamāī (but I much question whether the stroke for 'ī' in hamāī may not, as a similar one elsewhere, represent a 'k'); Sp. hamā(?).

⁸ D.J. ins. va.

⁹ D.J., D. ākās-patō hōmanih; others -patō haš or haīb (sio?) (?); (or is it possibly? ākās-patō-īhā, K.³ (Sp.)? Ner. does not corroborate the plurals, nor does the Parsi-Pers. MS.

¹⁰ So D.J.

¹¹ D.J. has curiously two dots over and a little before the character for 't' in tūbānō.

¹² D. yehābūnd; others yehābūntanō.

¹³ D.J. ins. ī.

¹⁴ D.J. ins. va.

¹⁵ D.J. om. ī.

¹⁶ D.J. ins. ī.

¹⁷ So D.J., D.

¹⁸ So D.J. alone (?); the translation of the Pers. does not show -ih.

¹⁹ D.J. ins. ī.

²⁰ D.J., D. ins. ī.

²¹ D.J. om the zak ī. This lanman corrects D.J.'s noīd (sic), and notices well that the ancient copyist has just written Zend noīd with the last stroke of his pen; yet here is the correcting 'lanman.' D.J. meant nō (=from us) + īd (?).

²² M. (?) ins. va.

²³ So D.J. mīnīshnō barā ich, and D.J. om. ī after Sp.'s mīnīshnō ich.

²⁴ So D.J.; K.³ (Sp.) dedrūnyān.

²⁵ Mf. seems to insert (?) a needed ī; it may, however, belong below; but we should not hesitate to supply one in such a case.

²⁶ D., M. girān; K.³ (Sp.) garēn. Have we here a transliteration, or have we here a translation, as Ner. will have it? Perhaps 'Bear away the thought which is the abode of eevere affliction (the Kingdom).' This should imply an interesting blunder arising undoubtedly from the

(86) mñn dñn denman mihanō (or 'mānō') mñn dñn denman
vīs va' mñn den denman zand va' mñn dñn denman matā kñnk
hōmanād' aushātā' ī vināskūr.

(87) vakhdūnih zak^a i valman^a ragelman^a zavar.¹

(88) barā zak ī' ānō' hūsh vardīnō.²

(89) "tebrūnak"³ (or 'tebrūnō') zak ī valman mīnīshnō vab-
dūnō⁴ [akārash barā vabdūnānd].

usual mechanical cause. An approximate transliteration of the Zend garemāntem would be garā(n)mān, so about. The nasalization (n) arises from the division; perhaps it is the usual 'ō' and not 'n' (same character); for the termination of the word had evidently become separated from its base, occasioning the separate translation which Ner. gives with vāsayatām, see mñn. The Parsi-Pers. MS., however, merely repeats garānman (so) in its translation line. Perhaps both the Pahl. trlr. and Ner. felt the figurative force of 'garm,' though they mistook the termination. The thorough discussion of such errors on the part of one or more of the translators at one place casts light upon their correctness in another; and also warns us against that indiscriminate dependence upon the translators which has been so fatal in some cases.

¹ D. (?) ins. va.

² D.J. ins. va.

³ Mf. hōmōnād.

⁴ So K.⁵ (Sp.), and others; D.J. aushātānō, but see the Zend, Ner.'s reading and the Parsi-Pers. trl. adāmī.

⁵ So D.J., D. (D. marking 'd'); K.⁶ (?) Sp.) seems difficult; Ner. is plain with grhāna; but the Parsi mistakes with 'kunf,' so for vabdūnih, transliterating vādūnī.

⁶ D. om. zak ī; D.J. has zak cancelled; D. ins. f after valman. D.J. has a zak written over ragelman, the ink looks darker, but the handwriting is the same.

⁷ D.; so the Pers. MS. translates at least zavar; others zavār (so).

⁸ D.J. om. f.

⁹ So D.J. barā zak ānō (avō?) hūsh vardīnēd in margin, but original; K.¹⁰ (Sp.) valman.

¹⁰ So D.J., D.; K.¹¹ (?) Sp.) difficult Parsi-Pers. MS. varđīn translated gardīn; Ner. parivartaya 'turn around;' not more correct, but interesting. The translators hit upon vart (vrt) rather than var (vr) in consequence of the 'dh' in verennidhi (sic).

¹¹ D.J. or M. om. vn, or first stroke.

¹² M. ? reads tebrūn; so the Parsi-Pers. has long ū, but curiously a tablūn (sic, hardly 'atlabūn' (so) as it seems), possibly the 'u' of tebrunak (so) should be left short in view of the termination. D.J. by a slip of the pen has t-b-n-(u?)-r-k for t-b-r-n-(?)-k; he can hardly mean tabr-lak 'destroy thou.' There is no reason why Spiegel's reproduction of K.¹³ 'tabrak' (so) should not be possible; yet as we have the verb-form 'tebrūnastānō,' 'tebrūn,' is natural, '-ak' being as usual the adj. (-noun) termination often loosely applied.

¹³ So Mf. seems.

(90) al pavan kolā II (dō) zbār frāz patūkō' hōmanāqdō' al pavan kolā II (dō) gavaē madam tūbānk' hōmanāqdō' [aīgash pavan yadman vinās karḏauō al tūbān yehevūnēd].⁴

(91) al damik khadītūnāq⁶ pavan kolā II (dō) ash⁶ al gōspend khadītūnāq pavan kolā II (dō) ashash.⁷

(92) mūdāknik hōmānāq⁸ avō zak ī lauman mīnīshnō [aīgah vad mānō⁹ mūdavan ī¹⁰ frārūnō mīnīḏauō¹¹ al tūbānō yehevūnāqō¹² mūn kīnik hōmanāq¹³] avō zak ī¹⁴ lanuan kerpō, [aīgah levatman kerpō¹⁵ ī¹⁶ lanuan kīnō yakhsennūq¹⁷.]"

Anathemas.

(93) barā azō¹⁸ ī zarḏō ī¹⁹ sahmīgūn²⁰ ī²¹ vish barā āyāftō [mān ash vish avō tauō barā āyāftō²² yekavīmūnēdō²³].

¹ D. ins. -ō, or va.

² D.J. adds -ō; D. reads yehevūnēd (?), or -nāq (?); D.J. has a cancelled pav-.

³ D. tūbān (?).

⁴ yehevūnēd (?) or -nāq (?).

⁵ D. khadītūnēd (?)

⁶ D.J., D. om. va.

⁷ So D.J.; others ash.

⁸ D. hōmand (?); D.J. hōmanāq.

⁹ So D.J. mānō; D. mān.

¹⁰ D.J., D. ins. ī.

¹¹ So D.J., D.

¹² So D.J., D. hōmand (?); and D.J., D. ins. va, or -ō.

¹³ D. -nēd.

¹⁴ D.J. ins. ī.

¹⁵ So D.; D.J. has kerpīh with the -ih apart; so three words before possibly, though the sign is confused, looking more like an -ō or a careless ī.

¹⁶ So D.

¹⁷ D. -nēd(?).

¹⁸ So D.J., D.

¹⁹ D.J. om. ī.

²⁰ So D.J. and Pers. MS.; K.² (Sp.) etc. D.J. has the usual sign for 'k' which may, however, well render 'g'; the Parsi-Pers. MS. seems sahmīgūn, hardly 'sinakgūn'; so D. distinctly simakgūn.

²¹ M. seems to introduce a 'k' or 'g', though the character is more probably meant for the 'v' of 'vish'; but if so it is in the Persian form and also misplaced; otherwise I cannot explain it, as 'v' would be expressed twice. The Parsi-Pers. is not very clear, but shows signs of long ī; its translation is, however, plain as zahir (so for zahar?).

²² So Mf.

²³ So D.J.

(94) amat kerpō¹ yezrūnānd² avō valman ī³ abarūbō ī hōm ī zarīnō va⁴ ash⁵ pēdākīnīh⁶ zanīshnō [aīgash chārakō⁷ barā yemalelūnō].

(95) barā gadakō⁸ ī⁹ javīdō varzīdār [mūn javīdār varzēdō¹⁰ aīgh¹¹ zak ī¹² ghal¹³ avāyadō¹⁴ varzīdanō] ī¹⁵ khrūkō-bavīhūnō¹⁶ [aīgh, rēsh¹⁷ vabdūnyēn¹⁸] āzārīdār barā¹⁹ yemalelūn.

¹ So D.J.

² So D.J., Mf.; others -nāq; so D.J. I should say that the word was a variant for yezderūnāfīd 'may they drag.' Unless a meaning closely allied to Ner.'s vināçayati is given to this word, it is, of course, an error which mars the section. The 'dragging of the corpse' may be the idea; cp. Vendīdād.

³ So D.

⁴ So D.J., D.

⁵ Obliterated in D.J.

⁶ M. may be pēdōk-? or 'pēdō-' not so the Parsi-Pers. MS.

⁷ D.J. om. ī; not so M.

⁸ aīgh='than,' or 'more than,' or different from.' Here we have another exceedingly important case to prove how the last Pahlavi copyists unconsciously preserved Zend texts different from those which they had just mechanically transcribed in the MSS. which contain both Zend and Pahlavi. The last copyist here wrote a vīveredvatō, either by oversight, originating the blunder (see some other MSS.), or following some predecessor; but his Pahlavi translation text (also mechanically copied) restores the correct reading with -varz- to vīverez-; the translation being impossible for vīvered-; we might even correct to vīverezvatō, (so?) on the strength of this varzīdār. I do not think that the 'd' is organic.

⁹ So D.

¹⁰ So D.J.; M. ins. va or -ō.

¹¹ D.J. om. ī.

¹² Corrected, D. and the Parsi-Pers. khrūk (for khrūk)-bavīhūnō. D. divides kbūr(k); but that is immaterial. The text is partially transliterated, and the sibilant treated as a form of ish, so with sevištō; (see note on Y. ix. 80, July number of the Journal of the R. Asiatic Soc., 1900; 'kbrūk' (so) would be quite legitimate as expressing the root of kbrvīshbyatō, we might even read khruvak, so, in fact, better.

The 'k' is again the frequent loosely applied letter. D. and the Parsi-Pers. MS. show the closest attempt, and as such give us the important reading bavīhūn='ish,' i. e. kbūr(-k)-bavīhūn. Although the latter word is mistaken, it gives us the fair rendering, 'desiring blood,' or 'prone to cruelty.' D.J.'s text is difficult of explanation in view of 'ish' in the Zend text and bavīhūn in D. The nearest seems basīm: khrūk-basīm 'having pleasure in cruelty,' but the letters represent 'basīnō'; it must be a mere blunder for bavīhūn (we are reminded of bisrayā?)

¹³ D. exaggerates the sign for 'ō' till it looks like that for 'k' or 'g,' or Persian 'n,' 'v.'

¹⁴ D.J. ins. va or -ō (so).

¹⁵ D. ins. barā; D.J. ins. va.

(96) mūn kerpō yezrūnād avō valman aharūbō hōm ī' zarfūnō¹ ash pēdākīnīh zanīshnō [aīgash chārak barā' yemalelūn].

(97) barā anshūtā ī' darvand ī' sāstār² mūn madam andahīshnō (andāshnō (?), read andāzīshnō for andazīshnō³) dād⁴ yekavī-mūnēd⁵ [mūn aīshānō padash andahīshn (sic ?) andāshn (?)* read andāzīshn⁶ (or 'andāzēd' (?)* or both) andāzīshn andāzēd].

(98) amat kerpō yezrūnād avō valman ī' aharūbō⁷ hōm⁸ hōm ī aharūbō hōm ī' zarfūnō vāsh⁹ pēdākīnīh¹⁰ zanīh [aīgash chārak barā yemalelūn¹¹].

(99) barā aharūbōkō¹² ī anaharūbō ī ahvān merenchīnīdār¹³ nērpātō¹⁴ va dastōbar mūn mīnīshnō va¹⁵ gōbīshnō yehabūnēdō¹⁶

¹ Mf.? om. ī (so).

² D.J. ins. va.

³ D.J., D. and Pers. MS. ins. barā.

⁴ D. ins. ī.

⁵ D.J., D. and Pers. MSS. om. avō, or the -ānō of a false pl; D.J. (or M.) seems sāstār ī (?); D.J. has ī before sāstār.

⁶ These signs must be meant for an 'andazīshn' to correspond to the 'andāzīshn' of 'andākhtanō.' It seems hardly fair to read the signs andāshan (sic) as they stand, though the meaning 'a casting' seems certain; cp. also new Persian andākhtan and andāza='throwing.' Or is the 'ā' of andāshan (sic) as in the case of 'aūharma(zd) and of the sign in 'yazadan,' here also='az' in auharmazd 'az'+ 'd' ?; giving us 'andazīshn' for andāzīshn? The Parsi-Pers. has andashn (for andahīshn: see below). The Parsi-Pers. has (see below ¹⁰) 'andahīshn andahēd (sic)' (so Mf.?) with no translation; D. marks the 'd.'

One might think of an aōshīshn as a solution for the word, but the first occurrence must mean, 'hurling,' and be related to the Pers. 'andākhtan.'

⁷ So D.J. and the Parsi-Pers. 'dād'; others yehabūnd.

⁸ No vacant space in M.; D.J. has -ō.

⁹ D. andāshn (?), or 'andahīshnō', sic for andazīshn (andāzīshn). D.J. has the characters andahēd (sic); but means, I think, andazēd for andāzēd.

¹⁰ D. ins. ī; D.J. decayed. ¹¹ D.J., M. ins. an additional hōm here.

¹² D. ins. hōm ī here; the Parsi-Pers. om.; D.J. is decayed here.

¹³ D.J., D. and Parsi-Pers. ins. va: va-ash, written vāsh in D.J.

¹⁴ So M. (N.B.); D.J. and others zanīshnō; so Spiegel (not as M.).

¹⁵ D. has -lūnō, which, however, needs notice only for the statistician, or special questioner as to the curious character which is reproduced as -ō.

¹⁶ So D.J., D. -kō.

¹⁷ D.J., D. ins. ī, and M. seems irregular, differing again from Spiegel; seems ānō ī nharūbō.

¹⁸ D.J., D. have no vacant space here; nor has M.

¹⁹ So D.J., D.

²⁰ D.J., D. ins. va: not so the Pers. MS.

²¹ D. om. -ō (sic), but D.J. ins. va.

va lā pavan kūnishiñō barā ayāfāt' [aighash kardakō' lā yehēvū-
nēdō' mīnēd va' yemalēlūnēdō' aigh vabdūnam' va' lā vab-
dūnyēn].

(100) mūn kerpō yezrūnād avō valman i' aharūbō' hōm¹² zar-
inō vāsh⁹ pēdākīnīh zanīh¹⁰ [aighash¹¹ chārakō barā yemalēlūn¹²].

(101) barā jēh I¹³ i' yātūkō¹⁴ va¹⁵ mūdākō¹⁶-kardār.¹⁷

[aigh mindavam¹⁸ tapāh] vabdūnyēn maclm panāhīh¹⁹ būrdār
[aigh panāhīh vinās-kārānō' vabdūnyēn] mūn valuan²⁰ rāf²¹ mīn-
ishiñō frāzō²² fravinēdō²³ chīgān nbr mūn vātō-shūōk-gūn²⁴ 'so;
or read shūtāk-gūn).

¹ D.J. ayāfēd (?); so the Parsi-Pers. (?).

² D. seems kirfakō (so), and also the Pers. MS.; but Ner. gives no sign; D. ins. i before lā.

³ D.J.

⁴ D.? ins. va.

⁵ Mf. (?)

⁶ D.J., vabdūnam; so M. and D.(?) and the Parsi-Pers.; om. Sp. mūn.

⁷ So K.⁸ (Sp.) in the erroneous mūn.

⁸ D.? ins. I, and D.J. ins. i after aharūbō. ⁹ D.J. om. i after hōm; M.? ins.

¹⁰ D. ash., om. v.

¹¹ So M. (N. B.) zanīh: not zanishn; D.J. and others zanishiñō.

¹² D.J., D. aighash; K.¹³ (Sp.) om. ash.

¹³ So D.J.

¹⁴ So D.J., D. seem; K.¹⁵ (? Sp.) would seem jēbō (?) I, but D.J. ins. a
'va,' Sp.'s apparent -ō may be va. We may suspect D.J. to be jēh-I; is
it jehīh?

¹⁵ D.J. om. i, but may have 'va:' but D. seems 'jeh-I i.'

¹⁶ So D.J., D.

¹⁷ D.J., D. 'va' for 'i.'

¹⁸ So D.J., D. according to the gloss, which, however, may have been
later and erroneous; see Ner.'s 'mandatvam,' the gloss being brought
into harmony by the negative. Following this, we should understand
the form to be a correct Pahlavi reproduction for the root-form of the
Zend word 'maodhanō.' In that case we might introduce a 'lā' on the
authority of Ner.'s 'na'; but it is the more rational to accept the Pahlavi
word in an evil sense just here, like its original: see the second
gl. The Pers. MS. translates kharūb-kardār; and the Pahlavi Pazand
Gl. understands the same.

¹⁹ D.J. seems mindavamīch or -af (?): was it an awkward mindavam-I,
so D.J. might seem to some to be tapāh -i.

²⁰ D. om. i.

²¹ So D.; D.J., K.²² (Sp.) ānō or avō, om. rāf.

²² So M. and D.J., D; D.J. also ins. va(?). Spiegel's form pūhal seems
improbable in view of the original text; see also Ner. who gives no
sign in that direction; the Parsi-Pers. has frāz pravinēd (text).

²³ One might restore this shattered word on the model of Y. xix. 8,
and the original Zend, as shūtāk-gūn; Ner.'s 'sāritam' shows that a
Pahlavi form of the Zend word must be meant. Strictly the word at

(102) mñn amatō¹ kerpō yazrñnāqō avō² valman aharñbō hōm
f zarñnō³ ash⁴ pēdākīnih zanishnō⁵ [aīgh ash⁶ chārak⁷ barā yemale-
lūn].

(103) amat min⁸ valmanshñn kerpō barā⁹ yezrñnāq¹⁰ avō val-
man f¹¹ aharñbō hōm f zarñnō¹² ash pēdākīnih zanishnō, [aīgh
chārakō¹³ barā yemalelūn¹⁴].

Y. xix. 8 is 'sñtak,' so the Pers. MS., but the Pahl. letter for *s* some-
times replaces one for *sh*. D.J. has what might be deciphered 'va
shñök-gñn' (or -kinō (?) sic), see shñtem; but with a consonant labial we
should read va shavök-gñn; D. has va savödö- (sic) vid? or sñödö,
the 'd' marked for savökö; Mf. seems sñökö- (sic) or savökö- (sic). The
Parsl-Pers. has vātō sñf. Aside from the original, one might read the
MS. shudf. It translates bād sñi. All obviously aim to imitate the
shñtem of the original.

¹ So D.J., D., and Parsi-Pers. MS.

² D. om. avō; not so the Parsl-Pers. MS.

³ D.J. ins. va (or -ö (?)); D. om.

⁴ So D.; D.J. seems to ins. va before pēd-.

⁵ So D.J.

⁶ D. om. 'min valmanshñn'; Ner. has asya.

⁷ D. ins. barā after kerpō; Pers. MS. has zak in its Pahl. text; om.
the rest.

⁸ Mf.? has avō; D. om. f; see the other places.

⁹ D. ins. f.

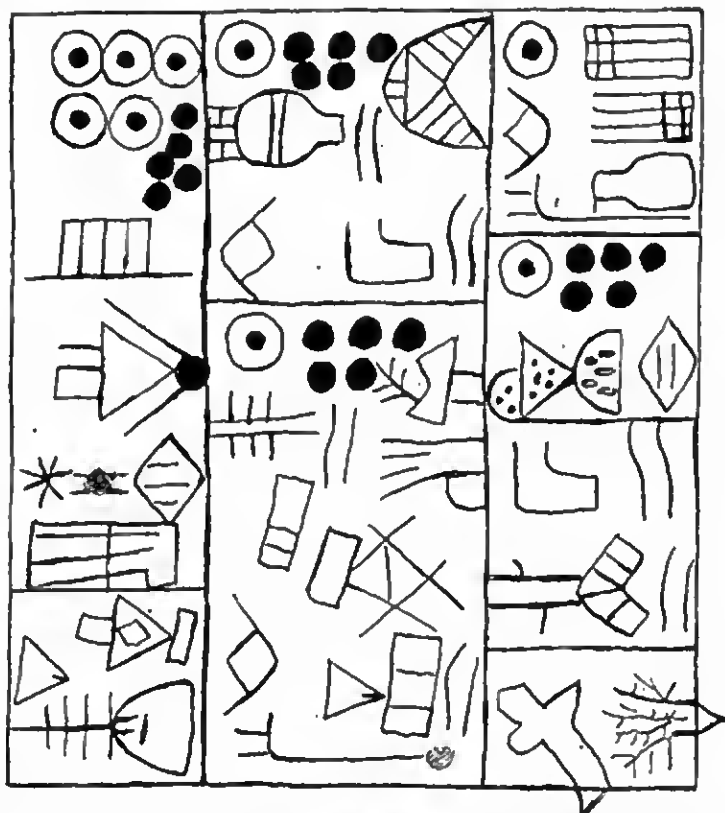
¹⁰ D. om. v- of vāsh, or 'vash.'

¹¹ So D.

¹² D.J. does not report this needless 103.

The Text of an Archaic Tablet in the E. A. Hoffman Collection.—By ELLEN SETON OGDEN, of New York.

IN the spring of 1901, while a student in Semitics at Bryn Mawr College, my attention was called by a footnote in Dr. Radau's¹ book, to a very archaic Babylonian tablet in the E. A. Hoffman collection in the General Theological Seminary, New



York City. By the kind permission of the Dean, the Very Rev. E. A. Hoffman, a copy was made; and as subsequent study

¹ Rev. Hugo Radau; *Early Babylonian History*, p. 12, note 1, and Appendix, p. 821.

of the inscription has shown it to be of exceptional antiquity and interest, the accompanying text is offered as a small contribution to the material for this period.

The tablet, which, with five others, was purchased in 1898 by Dean Hoffman, in Paris, and which forms part of a larger collection obtained in 1896, is of smooth black stone, $3\frac{5}{8}$ by $3\frac{1}{2}$ in. in size, with convex sides, sloping from $1\frac{1}{4}$ in. at the center to $\frac{3}{8}$ on the flat edges. The signs are clearly and strongly cut and the tablet itself in a perfect state of preservation. In the lower right hand case the bases of the signs are carried down over the edges, as though there were not room above.

Interpretation of the Archaic Tablet of the E. A. Hoffman Collection.—By GEORGE A. BARTON, Professor in Bryn Mawr College, Bryn Mawr, Penna.

My attention was first called to this tablet near the close of the year 1900. While making a study of the archaic inscriptions which had been published, I noticed the statement concerning this tablet in Radau's *Early Babylonian History*.¹ It was evident that Radau had not read the tablet. Later, one of my pupils, Miss Ellen Setou Ogden, through the courtesy of the authorities of the Seminary, secured a copy, and we made considerable progress in its interpretation. In September of the present year I was permitted to collate the tablet again. This enabled me to obtain a clearer impression of some of its most peculiar signs, and to establish the fact that at the bottom of Col. II, a circle like the figure 10 had been cut by mistake and erased.

Further study of the tablet has made it evident that it is almost identical with a tablet in Paris which is yet unpublished, but which Thureau-Dangin mentions in the preface to the *Supplément* of his *Récherches sur l'origine de l'écriture cunéiforme*, designating it as γ , and many of the signs of which he cites in the table which follows. When these signs and their location on tablet γ are examined, they correspond to the signs of our tablet, column for column and line for line. When this *Supplément* was published, in 1899, Thureau-Dangin had not identified all these signs.

In interpreting the tablet I have worked from the starting point furnished by the numbers. It is evident that the first of these gives the area of a field, and probable that those which follow give the dimensions of its various sides. This supposition has proved correct. The tablet so far yielded up its meaning that I gave a tentative transliteration and translation of it in my *Sketch of Semitic Origins*.² The tablet itself is of such

¹ Radau's *Early Babylonian History*, p. 12 n. and p. 321.

² P. 213 n. 5.



interest to Babylonian palaeography as well as to history that I venture to publish my version of it in connection with Miss Ogden's text, and to call attention to some of its most important palaeographical contributions to our knowledge. Unfortunately, the sign which designates the locality from which it comes I am unable to identify. The writing shows the document to be older than the Blau monuments, but later than the archaic inscriptions published last year by Father Scheil in his *Textes élamites-sémitiques* and the *Recueil de travaux*.^{*} Transcribed into the later Assyrian character it appears as on the opposite page.

It reads thus:



- I. 1. HIMV GANA DUK'-KA¹ DINGIR ?² KI' LAG'
2. SAL-LAL'-TUR'
II. 1. HIMVICL URI'-NI-A SIG LIK'-A
2. HIMVICL GAL PI NER-A DA''-KU GUR DIM-
MENA BABBAR NIN-A TAB BAR'' (UMUN)
III. 1. HIMVIC E BABBAR LUĞ AB TAB BAR
2. HIMVICL IGI'' KUR IR'' DU'' BAD LIK-A
GAR''-A
3. GIR'' ŠAG''.

I. e., I. 1. "3005 Bar of a field of clay, to the god ? presented
2. Sallatur. II. 1. 36050 cubits on its Akkadward side, the lower (side), from the beginning; 2. 36050 cubits running along the breadth of the ziggnrat of Shamash, the lady who pours forth brightness; III. 1. 36000 cubits (to) the temple of Shamash, the messenger of Ab, who pours forth brightness, (i. e. Sin); 2. 36050 cubits before the mountain unto the abode of Ishtar (?), to the beginning; for making brick. 3. May he give strength, may be bless."









NOTES.

¹ This sign, written , was identified by Thureau-Dangin, *Supplément*, No. 379^{na}. It is clearly a simple picture of an antique clay pot, originally in an upright position () , similar to that which is pictured twice in the archaic inscription published by Father Scheil in his *Textes élamites-sémitiques*, p. 180, and in the *Recueil de travaux*,

^{*} One of them was repeated in the *Journal of the American Oriental Society*, xxii, 126 ff.

vol. xxii, p. 149 ff., and which I reproduced in *JAOS.*, vol. xxii, p. 126 ff. Bnll, *PSBA.*, vol. xiii, p. 374, had conjectured from the form which this sign assumes in the inscriptions of Gudea, that it was composed of two elements, , a vessel, and , water. That view is now no longer defensible.





The sign in later Babylonian always stands for "pot" (see Brünnow's *List*, No. 5693), but pots were made of clay in the early times. Indeed, clay must have been employed for that long before it was employed for tablet writing, and in that early period it would be natural in writing to use the sign to designate a clay bed, or field of clay. The context indicates that that is the case in this tablet.


¹ This sign, , Thureau-Dangin, *Supplément*, No. 517¹¹, compares to . Miss Ogden first suggested the identification with , which I believe to be correct.  is afterward written , (Thureau-Dangin's *Textes chaldéens inédits*, No. 3, II, 6), and , (Manishtu-irba, Stele, Face A, xiii, 2), and , (Gudea, B. i. 8). From this latter form it is easy to see how the neo-Babylonian and Assyrian forms are derived. QA usually is the ideogram for a measure, which was the fractional part of a GUR or talent. Our tablet shows that the sign was originally the picture of a small vessel, which was, no doubt, used as a measure, and which was formed with a rounding bottom so as to be easily held in or on the palm of the hand, thus . The sign seems to be here a phonetic complement. It is of interest to note how early the use of phonetic complements began. One occurs on the Blau monument B. i. 2 (cf. *JAOS.* vol. xxii, p. 128).


² On this sign I am as yet able to obtain no light.





³ The form of this sign is as archaic as any form of it yet discovered, except the form in which it appears on the tablet of Father Scheil referred to in n. 1. It indicates that this text is younger than that.

⁴ Cf. Dangin's *Récherches Sup.*, No. 419. Delitzsch correctly explains its origin, *Ursprung der Keilschriftzeichen*, 168 ff.




⁵ The identification of this sign is somewhat uncertain. Its form, , resembles somewhat , the form in which Gudea, (col. A, xviii, 20), writes . I have with some hesitation identified it with that sign, which has in Sumerian the value LAL, and the meanings, "honey" and "good." With this same sign I have also identified , which occurs on Blau monument A, Rev., l. 2 (cf. *JAOS.*, vol. xxii, pp. 119, 120, and 122, n. 26). Was not the form of it in our present text a rude picture of a bee entering a hive, and the form on the Blau monument a variant, in which the hive is omitted, but the sting added?





⁶ This sign, , Thureau-Dangin correctly identified in *R. Sup.*, 44. Delitzsch's view of the origin is confirmed. It is the picture of a court plus the motive for great.



⁷ This sign, , Thureau-Dangin does not identify (cf. his *Supplément*, No. 230¹¹). He wavers between two or three possibilities. I




tentatively identify it with ,  of Gudea (Dangin's *Récherches*. No. 117), and with the sign , which occurs in de Sarzec-Heuzey's *Découvertes*. pl. 1^{bis}, in two or three different connections.  has the meaning "Akkad," which suits the connection in the tablet before us, and "Uršu," a kind of plant, which satisfies the meaning in the various connections in which the sign occurs in the *Découvertes*. I would suggest that the sign in the form on this tablet is intended for a picture of the leaf of some plant, that it originally represented the plant, and that it was applied to Akkad because that plant grew there in abundance.






* This sign is thus identified by Thureau-Dangin (*Sup.*, No. 438). I interpret it by Brönnow, *List*, No. 11250.










¹⁰ This sign, , was identified by Thureau-Dangin (*Sup.*, 530¹⁴⁷). It is evidently the picture of a hand with the thumb turned in. Hilprecht (*OBI.*, pt. ii, p. 40) and Delitzsch (*Ursprung der Keilschriftzeichen*) regard the sign as the picture of an arm. That was evidently a later form of the sign, or possibly a variant of the one before us. That it was simply the picture of a hand in early times the sign before us proves. Here it is the right hand. In some cases it may have been the left hand () in which cases it would approximate closely in form to the picture of a wing () in Blau monument B. This confirms my identification of that sign as a variant of the sign for hand (*JAOS.*, xxii, 124, n. 11).






¹¹ This sign, , occurs also on Blau monument B. I was able, from its connection in the tablet now under discussion, to identify it, when at work on the Blau text, with  +  (cf. *JAOS.*, vol. xxii, p. 124, n. 8), the latter occurring in Lugalzaggisi as , (cf. *OBI.*, 87, I, 18). Our sign gives the latter in a more curved and archaic form. The first element is the sign for "two," and represented the concept "doubling" or "increasing," "making abundant" (cf. Delitzsch, *Ursprung der Keilschriftzeichen*, p. 47, n.). The second element represented the concept "side," or "that which is seen" (Delitzsch, *op. cit.*, p. 141), and naturally came to express in connection with a heavenly body, "disc," and then "brilliance." In our text this sign is used to describe first the sun, and then the moon. There can, I think, be no doubt but that the identification is right.





¹² The group of signs which begins at this point is most puzzling, and my rendering is tentatively put forward with much hesitation. I have puzzled much over what constitutes the first sign. Is the line at this point a case-divider, or is it, like the basal line of  in col. I, a portion of a sign which might be easily mistaken for a case-divider? After much hesitation this seems to me the more probable view. In that case the first sign is . But what can this mean? May






















it not be a variant form of , which a lexicographical tablet published in the *Cuneiform Texts from Babylonian Tablets in the British Museum*, pt. v (No. 81-7-27, 49), defines as ? I tentatively so take it.  stands for "eye," "face," etc., and seems in our tablet to have the meaning of "before."

 is written in *Découvertes*, pl. 1⁴¹, in the form , and has usually been regarded as the picture of an eye. So Oppert, *Expédition en Mésopotamie*, ii, 64, Delitzsch, *op. cit.*, 111, and Ball, *PSB.A.*, xiii, 96. Probably the sign did originate in attempts to picture the eye, but as in some cases (cf. *JAOS.*, xxii, 125, "addition to n. 31"), it was represented in the earliest writing by various pictographs.  pictures the eye in one way,  in another. Perhaps the latter was conceived as representing the way in which a ray of light strikes the eye. Our sign, , may have been intended to represent the arch of the eye and the line of the nose, and was probably not intended in the first instance to represent the eye, but the face, and so would naturally mean "before." As the picture for eye was afterward used in the same meaning, it would be natural for it to supersede the other.









¹³ This sign, , I take to be an older form of  (cf. Thureau-Dangin's *Recherches*, No. 826), which appears in later Babylonian and Assyrian as . St 260 ff. calls it a *gunu* of  (old Babylonian ) and Delitzsch (*op. cit.*, 88) is probably right in accepting this as the explanation of the origin of . He is also right (*ibid.*, p. 69) in the view that  is a picture of a peg or post. A log or tree was represented by  (later ), and the log sharpened so as to stick in the ground represented the idea of "building," "making," or "doing," and the *gunu* of it, the idea of doing these things with energy or despatch. From this the sign came to represent rapid motion toward a thing, and then as a post-position to have the meaning "unto," the meaning which it has in our inscription. Kent has suggested (*AJSL.*, vol. xiii, 299 ff.) that the *gunu* signs were originally the picture of a hand. It is a suggestion which has much in its favor, but the form in which the sign occurs in our tablet gives the suggestion of the hand by five dots, which represent the five fingers.

¹⁴ This sign, , is written  on tablet γ (cf. Thureau-Dangin's *Supplément*, No. 231⁴⁴). The French savant has not identified it. I take it to be an older form of , later  (cf. Thureau-Dangin's *Recherches*, No. 233). It signified "mound," "abode," etc. Delitzsch (*Ursprung der Keilschriftzeichen*, 90 ff., and 156) explains the origin of this sign from the form which is used by Gudea(?), deriving it from , "court," plus the *gunu* signs. Perhaps Babylonian scribes understood it in this manner, but it seems clear to me that in the sign before us we have the diagram of a mound, dotted with dwellings.

¹⁵ This sign, , I take to be an older form of , later  (cf. Thureau-Dangin's *Récherches*, No. 129), meaning "bricks," or "to make bricks." These signs were once, as is well recognized, written perpendicularly. This very tablet was, perhaps, held in reading so that this sign would appear . It was, I think, intended to represent the arch of a brick kiln with the smoke from the kiln rising above. In the later form the smoke is omitted and part of another arch added.

¹⁶ This sign is very puzzling. Its form, , was apparently a picture of the neck and head of an ass, probably the original of the later , which still later became . Delitzsch has called attention (op. cit., 146-149) to the fact that in the period between Lugai-zaggisi and Gudea there is quite a series of signs which are almost identical in form. Thus, in addition to the sign already given, we have  equivalent to , "foot" (cf. Dangin, *Récherches*, No. 224), and in Manishtu-irba and Alu-usharshid , equal to  (cf. Schell's *Textes élamites-sémitiques*, pl. 1, col. I. 8. 8, and *OBI*, Nos. 5 and 6), "kiš." Now Delitzsch finds the key to this group of signs in , a hypothetical ground-form of "kiš," which does indeed approach the form , which the sign assumes as late as Gudea. Delitzsch explains this as the "Urmotive"  which designated "mass," plus the *gunu* signs. This gives him the meaning *kiš-šatu*, "boast," from which he thinks the sign came to signify "strength." He further thinks  was simply a variant of , and was applied to the feet because of their strength. Similarly he derives  from  plus  staff, assuming, apparently, that every ass had to be kicked and beaten. Now the scribes of a later time may have reasoned thus, and Delitzsch is possibly right in his explanation of , but as for the rest his explanation is too abstract to correspond to primitive ideas. , the ancestor of the sign , was, I believe, rightly explained by Houghton as long ago as 1878 (*TSBA.*, vol. vi, 470 ff.) as originally a picture of the human foot with a sandal bound around the ankle. The sandal distinguished it from  = , which signified "stand," "go," etc. This sign might in time come to represent "strength" and the verb "to be strong." The sign  is, I believe, a lineal descendant of the sign on the Hoffman tablet, which was originally the picture of the head and neck

of an ass. That, too, would naturally be used to represent the idea, "to be strong." Later, when the picture-writing had given way to linear writing, the forms of these three signs so nearly approximated one another that their functions were somewhat confused; hence the sign for "foot" displaced the sign for "ass" as a means of expressing the idea of strength. On the confusion of one of these signs with still another during this period, cf. Thureau-Dangin, *Supplément*, pp. 11-15. This discussion will explain my reasons for the interpretation of the sign. The reason for translating this last case as a prayer is that the inscription of Lugalzaggisi (*OBI.*, No. 87), inscription B. of Gudea, and those of many later kings have similar conclusions.

"This last sign, originally written in an upright position, , is evidently the picture of the top of a palm tree. The sign for palm tree in the time of Lugalzaggisi was . Delitzsch explains this latter form as composed of three elements,  = Sig, "favor;"  = , "open," "distribute," and  = , "people;" the whole meaning, "the tree which gives blessings to people" (cf. *op. cit.*, 144 ff.). Ball, on the other hand, regards the sign as the branch of a date palm to which a cone, such as are so often pictured on the monuments in the hands of winged beings, is being applied (cf. *PSBA.*, xvi, 103). I was inclined, until within the last few weeks, to think Delitzsch right (cf. my *Semitic Origins*, 161), but his view seems to me now too abstract, and Ball's seems preferable. It is clear, however, that, as noted in at least three other cases, there was a struggle between two different forms in the early writing, one of which finally displaced the other. The earlier form was the picture of a palm tree, such as we have on the Hoffman tablet; the later represented the act of artificial fertilization of the palm. As I have shown in the *Semitic Origins* that the artificial fertilization of the date palm was of Semitic origin, it follows that the picture of the palm which we have here is probably of Sumerian origin, while the variant form, which represented the fertilization, and which finally displaced the other, is of Semitic origin. I therefore identify the sign with , and interpret it as No. 7290 of Brünnow's *List*.

In conclusion it should be remarked that the study of such inscriptions as this and the Blau monuments makes it evident that the nearer we push back to the beginnings of Babylonian writing the greater is the variety of sign-forms upon which we come. As long as the sign was a picture of an object the picture might be varied at the fancy of the scribe. When the pictures became conventionalized, there was a period of struggle between the various forms of the signs which resulted in the survival of the fittest.

Creator gods.—By CRAWFORD H. TOY, Professor in Harvard University, Cambridge, Mass.

ACCORDING to Mr. Andrew Lang, the original high gods of all savage peoples are beings who had no beginning and do not die; fathers of their people, patrons and guardians of morality for the tribe and for the individual. If, he says, in later times they show a lower character, it is because they have degenerated; the original pure instinct of the savage has become tainted by the growth of animistic culture, and it has required ages for men to get back to the plane of their primal innocence and ethical clear-sightedness. As such lower grades show themselves in all half-civilized nations, his theory involves the supposition of a universal process of religious degeneration, and he does not shrink from the logical conclusion. All the gods of the great nations, he maintains, have traversed this cycle of transformations, first a degradation and then an elevation. As an interesting instance of the process he cites Jehovah, the god of the Hebrews. In the earliest Hebrew records Jehovah is an immoral anthropomorphic person, but undoubtedly, says Mr. Lang, he was at an earlier stage moral; he had fallen from his high estate of the older time when he was morally the equal of the Bushman Cagn and the Australian Daramulun and Baiame. No Hebrew or other Semitic ground for this statement is adduced or claimed by Mr. Lang, but in his mind it is demonstrated by the consideration that, if it were otherwise, the Hebrew theistic system would be inferior to that of all other primitive peoples. That is, he rests his construction of religious history on what he holds to be an established fact, namely, that all original creator gods are eternal and moral. The subsequent degeneration of these gods he ascribes to the influence of the animistic belief, a later growth, which, while it has given us as a precious possession the doctrine of the soul, led the popular fancy at first into all manner of degrading customs of worship and repulsive stories of gods. The alleged facts of savage belief on which this superstructure is based have been criticized by several recent writers,¹

¹ Notably by Mr. Sidney Hartland, in *Folklore*, 1898.

and their details need not be repeated here. I wish to call attention to one or two errors into which, as it seems to me, Mr. Lang has fallen in the interpretation of his evidence.

One preliminary remark may be made. It has been said by eminent authorities that early religion has no connection with morals. This statement may mean that early morals are very low, or that early gods take no account of the conduct of men; the former of these propositions is to be taken with a "distinction," the latter is contrary to much that we know of early peoples. As to the first, it is generally held (and it is admitted by Mr. Lang) that the moral character of a god is that of his worshippers, so that from the ethical attributes of a deity we may infer the ethical ideas of the community at the time when these attributes are ascribed to the deity; if he be thought of as a person, he must have some sort of moral character, and this must be included in the religion of the time. As to the second proposition, it is difficult, from paucity of data, to bring convincing evidence on one side or the other. Even the remarkably full and clear description of the Central Australians given by Messrs. Spencer and Gillen leaves much unexplained. These tribes do not appear to connect conduct with any superhuman being; but, on the one hand, they seem to have no religious worship of any kind, and indeed no gods; and, on the other hand, they have a definite system of moral conduct, so that, if they have gods, we cannot say that these do not take account of moral conduct. The question is well illustrated by the Old Testament records: if we looked only at the denunciations of the people by the prophets, we might conclude that the Israelitish religion of the time was quite divorced from morality, that the Yahweh of the popular faith cared for nothing but his perquisites of sacrifice; yet we can hardly suppose this possible of a community that produced the prophets and the legal codes. We find generally in savage peoples that the marriage laws (which are usually strict) are under the protection of the gods. As far as the evidence goes, it cannot be said that the gods ever stand aloof from morality as it is understood in their communities.¹ The question of the sort of morality in vogue in any given place and time is one of prime importance.

¹ Of the two sorts of service offered to the gods, the ritual and the moral, the former is apt to be more in evidence; the latter may easily be overlooked by the observer.

Mr. Lang has collected a large mass of material going to show that many early creator gods are morally pure and high. He has omitted certain other material that looks in a different direction, but there is an element of truth in what he says: we do find good ethical ideas and customs in low tribes. What he fails to give due weight to is that this ethical element, embodied in the person of the god, represents nothing more than the simple kindly instincts and social necessities of all communities. Man is born with certain impulses of sympathy, which he shares to some extent with the lower animals. These impulses, when not counterbalanced by the selfish instinct, lead him to treat his fellow-man or fellow-animal with kindness. The well-known story of Mungo Park is a good illustration of natural sympathy. Savage man is free from some of the complications of civilized life—from the selfish impulses arising from the accumulation of personal property and from the innumerable obligations springing from multiplied relations with fellow-men. This simplicity of savage life gives it such an air of innocence that some philosophers have held that civilization means declension in virtue. That is an unwarranted fancy, but doubtless the simple virtues exist among savages.¹ Further, as soon as society is organized, some rules respecting regard for life and property must be established. It is not strange that Mr. Lang's savages should have laws against murder, theft and infringement of marriage rights, and that the gods should be the guardians of the laws. And this is all that is involved in his contention regarding early moral creators. They embody the current morality, and that represents the natural impulses of human beings.² It may be added that the 'eternal' character that he ascribes to early gods is of an equally simple nature. On this point the statements of savage theology are often vague: the creator may have had a beginning or he may not. Where he is conceived of as without beginning, this is due to the necessity of having some fixed point of starting. It is the negation of beginning and not the affirmation of eternity. It is impossible to go back and back

¹ This remains true after the abstraction of probable or possible influence from contact with whites.

² See, for example, the precepts of the Kurnai god, given by Howitt, in *Journ. Anthr. Inst.*, 1885, p. 313.

for ever—one must pause somewhere.¹ How a given tribe came to fix on a certain person as the originator of the world, we cannot say; any such determination has been preceded by a long period of which no records exist, and the conception of the creator is doubtless a relatively late achievement.

The view that the animistic cult has induced degeneration appears to rest on a confusion of ideas. Since the morality of the religion of any period is the morality of the community of the period, decadence in theistic conceptions must mean decadence of society; but the theory of a universal social degeneration will hardly find favor even with Mr. Lang. Though it is far from being proved that mythology is a product of animistic belief, it is true that the morality assumed in early myths (and in later ones as well) is often inferior to that ascribed to the great gods. Theology and mythology represent, to a certain extent, two distinct lines of thought, two currents, as Mr. Lang well puts it, flowing together through religion. Theology deals with the conduct of life, mythology with the construction of the world and of society. For this reason the latter permits the play of popular fancy to an extent not generally possible in the former. Mythology is not religion but science—a distinction that Mr. Lang fails to make. When men approach the gods in worship, they think of them as the guardians of the existing social laws; when they undertake to account for the origin of things, they are unrestrained by moral law, and may give loose rein to the baser side of human nature. It is the difference between dealing with the present, for which men feel responsible, and dealing with the past, for which they do not feel responsible. One example is found among the Central Australians, whose stories of the ancestors (creators and social constructors) set at naught all the ethical customs that the people now observe with the utmost strictness. An example of a slightly different character is furnished by the extermination law of Deuteronomy (ch. 13), and Joshua (chs. 6-11), which has in mind a former vanished situation, and would probably have been impossible for the end of the seventh

¹ This doubtless is the signification of the Central Australian Ungambikula, "out of nothing" (Spencer and Gillen, *Central Australia*, p. 388), not, however, exactly "self-existing," as Mr. Lang renders it (*Making of Religion*, p. xxi).

century B. C. in the kingdom of Judah. What the Israelites in the time of the conquest actually did to the Canaanites was far more humane than the policy ascribed by the later writers to Yahweh; but we should not call this a proof of ethical degeneration.

There is, however, another consideration, which has been well stated by Mr. Lang himself.¹ Myths often contain expressions of early usages and ideas that are condemned by a later age. Cannibal gods, for example, had their origin in a cannibal society, and polyandrous goddesses in a polyandrous society.² Stories of this sort continue for a long time to stand side by side with elevated conceptions of the character of the gods; the examples are too well known to need citation. Here, again, we have not degeneration, but rather the opposite. It is the antagonism between the more advanced and the more backward circles of the community; an antagonism that exists, so far as we know, everywhere and at all times. Some portion of the morally low mythical material reflects the usages of a former time. We cannot say which of the two lines of thought, the religious and the mythical, was the earlier. Probably they began at the same time; the wish to account for the world was probably coeval with the impulse to enter into relations with the superhuman powers.³ The fact suggests another point that Mr. Lang appears not to have had in mind. He has observed that in some cases, among savage tribes, morally low stories occur in conjunction with morally high conceptions of deities, and in these cases his explanation is degeneration. But the same fact appears in Homer, and the explanation is probably the same in the two cases. In Homer we easily recognize a fairly high moral conception with a background of low myths, and we assume that the Homeric period was preceded by a long period of barbarism. We have probably to assume a similar condition in the savage history known to us. But Mr. Lang appears to take it for granted that Daramulun, Baiame, and the rest are primitive, and he cannot account for their moral eleva-

¹ In the first edition of his *Myth, Ritual and Religion*.

² See Barton, *Semitic Origins*, ch. 2.

³ There are facts that appear to militate against this view. The question is too large to be discussed here.

tion except by the supposition of a primitive ethical intuition in the human soul. Now, from the point of view of theism, human nature is a divine revelation, and human thought a divine intuition, and so far he is right; but he apparently wishes to see in high savage morality a full-grown intuition independent of the ordinary processes of human growth. His hypothesis involves the supposition of a full-grown social order, since the ethical laws to which he refers relate mainly to the constitution of society. He forgets that a hundred millenniums of human experience lie behind the gods of the lowest tribes we know. In this space of time there is room for any development that we can conceive, and there is a possible explanation of the ethical differences between mythology and religion.

In another point Mr. Lang's conception of religious history seems to be not well thought out. In the first place, he is under a misconception in supposing that he stands alone in the view that a god is not necessarily a development out of a ghost or a beast, but may have been originally thought of as a man-like being; others have held this view.¹ Thus he spends much time in assailing a position that is by no means the reigning one, and he seems to suppose that in refuting it he is overthrowing the argument for a gradual development of the idea of a god. He makes the mistake of parcelling off the genealogies of superhuman beings too sharply. All spirits, according to him, come from ghosts, and all high gods from man's primitive intuition of an exalted person who is creator and father. But, with our ignorance of early human history, it is impossible to rest in this smooth and simple division. If we had records of savage history for some thousands or myriads of years, we might venture to frame a definite theory of theogony; as a matter of fact, our knowledge of this history extends over only two hundred or three hundred years at most, and even in this short space it is most meagre. Moreover, such knowledge as we have of the history of human ideas and customs leads us to suppose that every idea or custom is complex, and has reached its existing form by the convergence of many lines of thought and experiment. It is not possible to say whether man began by deifying beasts or inanimate objects or human beings or ghosts or by

¹ Among them Mr. Hartland.

imagining great superhuman man-like beings as the authors of all things. There are facts that may be adduced in favor of all these hypotheses. Who can tell by what devious routes early man reached well-defined conceptions of the unseen Powers? We have to content ourselves with chronicleing the earliest facts we can find, and awaiting the discovery of new facts that may throw light on the problem.

Mr. Lang attaches great importance to the fact that in many cases the "high gods" of savages are not approached with sacrifices and offerings, and, as he thinks, were never so worshipped. Such propitiation was reserved, he holds, for the undignified greedy spirits of ancestors and similar inferior supernatural beings. It is possible that certain gods have never been mollified by gifts or importuned for blessings; but in the nature of the case it is impossible for us to determine whether or not this is true. The memory of savages reaches back to no remote period, and what the original custom was they cannot tell. Possibly many ancient gods shared the fortunes of the Zulu Unkulunkulu,¹ who lived so long ago that the recollection of him had become dim, and the people's interest turned to their ancestral ghosts. With such changes in popular cults we may compare the Babylonian and Greek succession of divine dynasties, in which the somewhat vague figures of Heaven and Earth yield to nearer and more human deities. And in fact the savage Supreme Beings, described by Mr. Lang, commonly dwell in Heaven, and are more or less removed from the passions and the affairs of men. On the other hand, such creators or constructors as (according to Spencer and Gillen) the Central Australians recognized were decidedly human in their purposes, plans and modes of action, and neither to them nor to the spirits of the dead were gifts offered. These people seem to have no social relations proper with superhuman or extrahuman beings; they believe that their world was made or shaped by such beings, but, for themselves, they are satisfied to live their lives with such social regulations as have been devised by them in the course of ages. They are very nearly in the position of certain circles of our own time, who hold that the world was made, but see no advantage in entering into relations with the maker.

¹ As described in Callaway's *Amazulu*.

In this case, as in many others, modern thought, by philosophical reflection, has reached a conclusion not substantially different from that held vaguely by savages. We are unable to say whether or not the present creed of these Australians has always been held by them. If they once paid worship to the creator-ancestors, then some process has gone on in their history of which we know nothing. If they have never paid worship, they may represent an early sub-religious stage, possibly existing at some time everywhere, in which no social bonds united man to the extrahuman powers whose existence he vaguely recognized. Out of such unworshipped powers may have come, in the course of time, the distincter moral figures to whom no worship was offered. It is not improbable that there were different lines of development among different savage tribes, just as there have been among civilized peoples. We cannot explain how it was that the Indians and the Iranians, starting (as apparently they did) from the same body of beliefs, followed diverse paths, or how it was that both of these groups differed religiously so greatly from the Chinese. There appear to be initial and fundamental differences between the various savage systems of thought, and these, as well as their resemblances (in totemism, taboo, etc.), must be studied.

In regard to the relation, as to their origins, between spirits and man-like gods, one obvious point is not always had in mind. There may be such gods that never were spirits, but the rise of a god from a spirit is by no means inconceivable. Mr. Lang and others sometimes speak of spirits as if they were regarded by savages as immaterial. We know, however, that they are supposed to have bodies, real, though of a peculiar character, not subject to the ordinary laws of human bodies: they move rapidly through air or water or solid earth, may assume different shapes or become invisible, yet eat, drink and sleep as human beings do. Now Ea, Indra, Zeus and Yahweh have just such bodies, and, so far as corporeal form is concerned, might once have been spirits. Nor is there any difficulty in supposing that out of a mass of spirits one might in time be clothed with moral qualities and supreme dominion;¹ and it is not necessary

¹ Professor Hopkins calls my attention to the fact that the Lord-Spirit of Yoga philosophy is at first just such a being—a separate spirit, morally superior to other independent spirits.

to hold that moral gods arose always out of the same primeval form. There are facts that seem to be more easily explained by the supposition of a difference of origin between gods and spirits. In the old Hebrew system the angels (ancient gods) are kept distinct from the spirits; and the Chinese, Hindu, Greek and Hawaiian ancestral spirits form a class by themselves apart from the gods. On the other hand, the two classes, gods and spirits, are often identical in functions and powers: the god of plague is not to be distinguished in this regard from the spirit of disease; the Hebrew spirits sit in the divine council just as the angels do. Doubtless these civilized mythologies belong to a relatively late period, and presuppose a long preceding history; but there seems to be no good reason why the same fundamental ideas should not be found in widely separated ages of religious growth.

Sacrifice and animism are not certainly or necessarily coeval, and they do not imply religious declension. The beginnings of the sacrificial custom are not known to us, and we must beware of constructing the religious history of man from the few and uncertain reports we have received of savage beliefs. These beliefs have not yet been properly examined. When we have good opportunity to test the accounts of travelers we frequently find occasion to doubt their correctness. We criticise them from our several points of view; Mr. Tylor objects to one thing, Mr. Lang to another. Much contempt has been expressed for the reports made by travelers to the effect that certain tribes had no religious beliefs or usages; now, it seems, it may be necessary to guard against crediting savages with too much religion. But, whatever may turn out to be the truth on this point, we have to recognize the fact that sacrifice is connected with that sense of intimate relations between gods and men that has been the starting-point of the higher religions. Sacrifice has its mercenary non-moral side, and doubtless represents a religious conception inferior in certain regards to simple reverence for a just and loving deity. But it has its roots in human nature, and is an advance on a system in which the gods have nothing to do with human life.

Remarks on the Hebrew Text of Ben-Sira.—By CRAWFORD
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Mass.

ABOUT two thirds of the Hebrew text of Ben-Sira have now been discovered (most of chapters 3-16, 30-32, 35-51, and parts of other chapters)—enough to justify a provisional opinion as to its character. The heated discussions of the last five years appear to have ceased, and a consensus of judgment is gradually being reached. The view is gaining ground that the fragments discovered represent a genuine Hebrew text, but a very corrupt one—a text that has passed through many hands, has suffered a variety of fortunes, and only to a limited extent furthers the reconstruction of the original book.¹ The hypothesis that the Hebrew text, as a whole, is a retranslation from the Syriac or from the Greek or from both these, can hardly be maintained. The opposite view is supported by the following facts: (1) In a number of cases the Hebrew is obviously independent of the Versions,² and sometimes enables us to explain the erroneous readings of the latter.³ (2) While there is often agreement between the Hebrew and one or both of the Versions, the agreement is so irregularly distributed (the Hebrew inclining now to the Greek, now to the Syriac, in the same paragraph and even in the same couplet), that to suppose the scribe to be a translator would be to credit him with a highly improbable catholicity or capriciousness, or with a still more improbable spirit of critical research. (3) In the majority of passages the style has the qualities of the old aphoristic literature—the condensation and the curtness (sometimes approaching obscurity) of Proverbs and

¹ This view is held by Neubauer, Cowley, Schechter, Taylor, Driver, G. Margoliouth, Smend, Bacher, König, I. Lévi, Nöideke, Schlatter, Ryssel, Houtsma, Abrahams, E. N. Adler, Tyler, and others. On the opposite side are D. S. Margoliouth, and perhaps Bickell, Gaster and others.

² See, for example, 8. 6, 7, 11, 14, 15, 16, 9. 4, 11, 15, 10. 5, 7, 10, 17, 18, 22, 11. 28.

³ As in 18. 82f., 19. 1, 20. 6, 36. 26.

Koheleth—a literary form that a late translator would not be likely to attempt or to attain. (4) The vocabulary is so similar to that of the latest Old Testament writings that, after excluding a few Syriasm and Arabisms and some obvious imitations of Old Testament passages, we cannot regard it as belonging to the period during which translations would probably have been made; for such a period would almost certainly have betrayed itself by its diction.

In connection with the Aramaisms and Arabisms that occur in the Hebrew fragments the question arises: How far are these to be referred to the original Hebrew text, or to the earliest form of Hebrew text that can be fixed, or to the diction of later scribes?

First, as to the Aramaisms. The composition of the Hebrew Ben-Sira may be placed at about 190 B.C., at which time the current spoken Hebrew was probably largely contaminated with Aramaic words and expressions. The facts that Assyrian and Jewish officers of the time of Hezekiah were acquainted with Aramaic (2 Kgs. 18. 26), that Aramaic was the official language in the western provinces of the Persian empire, that Aramaeans were found in large numbers in the West, that portions of the books of Ezra and Daniel are written in Aramaic—all these show that this language had penetrated deep into the common speech of the Jewish territory. The Chronicler, writing in the third century, employs a number of Aramaisms, and many more occur in Koheleth, a book that may belong to the same period as Ben-Sira, or may be a century or more later. A comparison between these two shows some interesting resemblances and differences: they are alike in their free secular tone and spirit, both standing to a certain extent outside of the theocratic circle of interests; they differ in the fact that Koheleth shows no interest in the sacred books, while Ben-Sira's piety leads him to preserve the traditional expressions and grammatical constructions of classical Hebrew; thus, he freely employs *wa* with the Imperfect, while Koheleth has largely adopted *we* with the Perfect. It cannot be supposed that Chronicles, Koheleth and other late Biblical books exhaust the borrowed Aramaic vocabulary of the time; Ben-Sira may have used many words not found therein.

When we come down to the second century of our era, the point to which we can probably trace the existing text of Ben-

Sira (as will be shown below), the case is still stronger. Aramaic was then the vernacular of the Jews, Ben-Sira's book was not guarded by canonical sacredness and an authoritative text, and scribes might naturally introduce Aramaic words and expressions. In the succeeding centuries, down to the probable date of the MSS. of our Ben-Sira fragments (the tenth or the eleventh century) Aramaic influence continued. The linguistic relations, it is true, were modified: after the Moslem conquest, in the middle of the seventh century, the Jews, especially in Babylonia, began to adopt Arabic as their language of intercourse; but they continued to write in Aramaic or in Hebrew with a mixture of Aramaic (and Arabic), and the employment of Syriac terms by copyists would be natural.

It thus appears that at no period in the history of the Hebrew text of Ben-Sira would it be strange to find that it contained Aramaic words. These might be of the Western dialect or of the Eastern; but it is not always easy to draw the line between the two in Jewish writings, for the reason that in these writings both dialects were affected by Hebrew. Such a form as נחכם (BS. 37. 19), if it be an Imperfect, is certainly Eastern; but it is difficult to make such a distinction in the vocabulary.

The number of Aramaic words not found in Old Testament or in late Hebrew writings is not great. In addition to the one mentioned above (נחכם) the following appear to be Syriasm. In 3. 13, עוֹב is employed in the sense "forgive," in imitation of Syr. שבק; 8. 11, תוֹח, "depart," if it be the right reading, is not Hebrew; but the word is, perhaps, miswriting of תוֹע, and the text appears to be in disorder; 6. 7, 13. 11b, נסיוֹן, for which Saadia has מסה and מנסה; 12. 13, 39. 30, חית שֵׁן "beasts of prey," Hebrew חית השרה or ה' הארץ; 30. 20c, נאמן "eunuch" is translation of Syr. מהימנא; 8. 1, קשה "hard, cruel;" 9. 18, משה על פיהו; 31. 7, נקש "stumble," cf. 41. 2c; 38. 25d, שעיות "discourses." בית (42. 12)

¹ It is impossible to understand נאמן here otherwise than in the sense of "eunuch," and this sense is not Hebrew; the Hebrew word for "eunuch" is סרים. Arabic أمين الصندوق is "treasurer," and an εἰσπράκτορ might be a treasurer, or might be a "trusted" person in any position; but this fact does not warrant us in regarding "eunuch" as a Hebrew signification of נאמן.

"among" (= **בִּינָה**) is doubtful; it occurs in Pr. 8. 2, and may perhaps be regarded as a neohebraism.

Very few Arabisms occur in the fragments. If the reading of 12. 3 (**אֵין טוֹבָה לַמִּנּוּחַ רָשָׁע וְנָם** [וְנָם] **צָרָקָה לֹא עֵשָׂה**) be correct, **מִנּוּחַ** must be taken as identical with Arabic **منح** —the word is not elsewhere found in Hebrew or Aramaic. The Versions, however, do not so understand it: Greek has *ἐνδελεχίζοντι* "persistent," apparently reading some form of **נָחַ**; Syriac has **מִיָּקָר**, apparently reading Piel or Hifil of **נָחַ**. Smend, followed by Ryssel, emends to **מִנְיָה**, translating: "there is no advantage for him who leaves wicked men in quiet." The objection to this reading is that it fails to bring out the point demanded by the connection, namely, the diverse results of giving to the righteous and to the ungodly; thus, in v. 7: "give to the good and withhold from the bad." Failing of a better explanation, we shall have to suppose that a root **מָנַח** "give" did exist in Hebrew, or that the form here used is an Arabism that came in to the Hebrew vocabulary not from late scribes (since Septuagint and Syriac had nearly these consonants), but at an early period.

The stem **חָלַק** undoubtedly occurs (38. 1 and elsewhere) in the sense "create," a meaning found elsewhere only in Arabic. It is possible, therefore, that in Ben-Sira it is an Arabism, the insertion of an Arabic-speaking scribe; a fact that would not be at all strange, since Arabic became the language of the Jews in the Moslem realm probably before the tenth century. Several scholars (Nöldeke and others) hold, however, that the sense "create" may be good Hebrew. The stem has acquired sets of opposed meanings, on the one hand, "create," on the other hand, "perish," and both may be derived from an original sense "divide, measure, arrange." It is conceivable that the meaning "create" existed in Hebrew, and only by accident does not occur in the Hebrew texts. Yet this cannot be said to be likely, and there is no difficulty in accepting the word as an Arabism.

The participle **מִשְׁרָקָה** "shining" (50. 7) appears to be an Arabism. One may doubt the origin of **רָעָה** "have regard for, honor" (38. 1), a meaning that may come naturally from the common Old Testament sense "pasture, feed, take care of." The special sense "honor" may have come in under Arabic influence.

It is to be noted that, while there are almost certainly cases of translation from a Syriac text (notably in the acrostic, 51. 12-30), not all seeming cases of translation are to be so explained. As an illustration we may take 46. 20, in which the first complet (speaking of Samuel) reads: "and even after his death he allowed himself to be consulted, and declared to the king his ways." Here the word "ways" does not agree with the Old Testament narration and is obviously inappropriate; the Greek, the Syriac and the Latin have "his end," which is what the connection demands; the Hebrew ררכי is a synonym of ארחותי, and this is a corruption of אחריתו. As the Syriac has אורחה, it is natural to suppose (as Lévi does) that the Hebrew is a translation of the incorrect Syriac form. But a Hebrew scribe with the Syriac before him would probably have written the familiar Hebrew word ארח and not ררך. The latter is more simply explained as a variation, by a Hebrew scribe, of ארח, which would be accounted for as a corruption of the original Hebrew אחרית.

The question arises, how far we can now establish the original Hebrew text of Ben-Sira. The answer must be, that it is not possible to fix the original as a whole. There are many passages in which there need not be doubt as to the form, and there are many in which both form and meaning are questionable. The most that can now be attempted is to establish a probable text of about the third century of our era. In general, our Hebrew fragments agree with the quotations in Saadia, and therefore may be taken to represent the current text of the tenth century. The Greek, Latin, and Syriac Versions furnish a somewhat corrupted text of the third, fourth, and fifth centuries, and the Talmud quotations appear to be in general accord with the unglossed Greek (Gs.). In the Hebrew and the Versions we have probably two generally independent lines of tradition; the one coming down chiefly or wholly through Palestinian and Babylonian Jews, the other coming chiefly through Alexandrian Jews and Christians. The former retained the original Hebrew, and there is no evidence that a Jewish Aramaic translation of it was made. The existence of the Hebrew was known to Jerome, but, instead of going to the original, he adopted the Old Latin Version without revision;—a regrettable procedure, as a translation by Jerome would have gone far to fix the text of the

fourth century for us. As it is, the Old Latin offers a highly glossed text of about the third century, and this may be controlled in part by the Syriac and the unglossed Greek. Such comparison being made, we have in the Versions a text standing at the distance of about four centuries from the original translation into Greek, and bearing the marks of scribal carelessness and revision. The Syriac translator undoubtedly exercises his editorial functions often freely, and it is not improbable that Ben-Sira's grandson took liberties with the text in the interests of Greek clearness and smoothness. The Hebrew, on its side, had suffered similar fortunes. In the third century it had been nearly five hundred years in the hands of scribes, and it would have been a miracle if it had escaped without additions, omissions, and corruptions. Our fragments are burdened with another long period (about four hundred years) of transmission; yet, after eliminating obvious blunders of writing and arrangement, we may conclude that their text is not very different from that known to the Talmudic writers, after this latter, in its turn, has been freed from excrescences. The result is that we reach two main text-records in the third century, one Hebrew and one Greek. When these are compared, it appears that their agreements and disagreements are so involved that it is impossible to distinguish families of manuscripts in a strict sense. We are rather led to the conclusion that the constant activity of scribes throughout the Christian and Jewish worlds had produced a considerable variety of readings, and that these are distributed among the different groups according to laws with which we are not acquainted. For convenience's sake we distinguish two Greek types, one Syriac, and two or three Hebrew, but an archetypal text accounting for all these we are not yet able to construct.

The Collection of Oriental Antiquities at the United States National Museum.—By Dr. I. M. CASANOWICZ, U. S. National Museum, Washington, D. C.

THE beginnings of the Section of Oriental Antiquities at the National Museum were described by Dr. Cyrus Adler in this *Journal*, vol. xiii, pp. ccciff. Since then it has slowly but steadily grown, and though it is still in the "day of small things," it comprises sufficient material to be representative in its several divisions.

The section is now officially divided into the "Division of Historic Archaeology" and the "Division of Historic Religions," both forming a part of the "Department of Anthropology."

The Division of Historic Archaeology occupies the two alcoves west of the Rotunda. The visitor's eye is attracted to them by the colossal composite figures of the human-headed winged lion and bull which guard the entrance to these compartments as they once guarded the entrance to the palaces of the Assyrian kings. Inside are installed the collections of Biblical, Assyro-Babylonian, Egyptian and Hittite antiquities. The collection of Biblical antiquities includes casts of the monuments found on Palestinian soil, and some specimens of the geology and flora of Palestine; a collection of the musical instruments mentioned in the Bible; a series of the coins of Bible lands; a collection of the precious stones mentioned in the Bible; and objects belonging to modern life in the Orient, which serve to explain and illustrate many allusions in the Bible, such as a goatskin water-bag, millstones, *kohl*, etc. The Bible itself is represented by a collection of facsimiles of manuscripts, and old and rare editions of the original texts, as well as by copies of the most important ancient and modern translations.

Of the Assyro-Babylonian objects may be mentioned, besides the composite figures referred to above, the black obelisk of Shalmaneser II, the stele of Sargon II, found in Cyprus, the two Gudea figures from Telloh, Deluge tablets, a model of a Temple-Tower of Babel, made at the Museum after the descrip-

tions of the Temple-Tower of Borsippa, and a series of bas-reliefs. The most important recent accession from Mesopotamia consists in a collection of Judæo-Babylonian magic bowls, inscribed in Hebrew and Syriac respectively, and sixty seals which range in date from about 3,500 down to the Persian period. The National Museum now owns nearly a hundred Oriental seals and upward of three hundred flat casts of seals.

Among the Egyptian antiquities, those connected with the funeral rites obviously form the principal part. There is a stately mummy well preserved in its original case. There are six finely wrought coffins, presented by the Egyptian government; besides funerary boxes, jars, scarabæi, *nshabti* figurines; a series of squeezes from the tomb of Taia; facsimiles of Ani's and Anhai's papyri of the "Book of the Dead," etc. But also other objects, bearing on the religion, culture and history of the land of the Pharaohs, are not lacking. There are specimens of the geology and flora of Egypt, casts of the statues of some of the chief divinities and of the great historic rulers, such as Chefred, the builder of the second largest pyramid, Amenophis II, Seti and his great son Rameses II, Tirhakah, and others; also the facsimiles of the Rosetta Stone and the Canopus Decree.

The monuments found in Asia Minor and North Syria and in part attributed to the Hittites, include, besides various divinities, composite figures, hunting scenes, etc., the colossal statue of Hadad and the torso of the statue of Panamu II, both of which bear "old-Aramean" inscriptions.

The Division of Historic Archaeology includes, besides two Persepolitan casts, a rare piece of mosaic, measuring about eight by six feet and representing a lion attacking a wild ass. This piece was taken from the floor of a temple of Astarte in Carthage. Then the serpent column of Delphi, a cast of the bronze original now at Constantinople, which was dedicated by the confederate Greek cities to Apollo at Delphi after their victory over the Persian at Plataea (476 B. C.), and is thus a relic commemorating the first struggle of the Greeks for liberty and independence.

Leaving the Division of Historic Archaeology and returning to the Rotunda, two colossal images of Vishnu and Buddha, which, for lack of other accommodations, are placed at the foot

of the staircase, beacon the visitor to the Division of Historic Religions in the southwest gallery. Here the collections of ceremonial objects of six religions have thus far found a home, in fourteen large cases, besides a number of small Kensington cases. The cases are built in compartments, or according to the alcove system, so that each individual religions collection may be viewed and studied separately, without intrusion from another one.

The first two compartments are occupied by the collection of modern Jewish ceremonial objects. The collection is perhaps unrivaled in completeness and in artistic and historical value. It comprises curtains of the Holy Ark; Torah scrolls with silver bells, breastplates and pointers; Megilloth in revolving cases of wood and silver of rare workmanship; manuscripts of prayer books; lamps, phylacteries, prayer-shawls, and other objects used in the service of the Synagogue. Then the objects used on feast days, such as the *shofar*, *lulab* and *ethrog*, etc., and especially a complete set for the semi-ritual Passover meal (*seder*). One case is given to objects used on special occasions, such as utensils of circumcision, marriage contracts, wedding rings, a slaughtering knife, etc. Another case contains a series of embroideries and tapestries depicting Bible narratives, as the sacrifice of Isaac, the worshipping of the golden calf, the fight of David and Goliath, etc.

Judaism's daughter-religion, Mohammedanism, comes next, showing a model of a mosque, manuscripts of the Koran upon their inlaid stands, mosque lamps, flags and tablets, some of the equipment of pilgrims to Mecca, and the costumes and utensils of several of the Dervish orders.

Graeco-Roman religious sentiments are illustrated by a set of statues and busts of the *dei maiores*, as well as *minores*, and bas-reliefs which depict mythological scenes, as the battle of the gods with the Titans, etc. A collection of sepulchral and votive tablets allows a glimpse into the popular religious views and practices.

Leaving this classic ground, the visitor is transferred in spirit to East Asia. There he first meets Brahmanism, which sways the millions of India. The collection comprises a set of marble images of the so-called *trimūrti* gods and their suites, of the *avatars* of Viṣṇu and some of the minor divinities. Special

notice deserve two finely carved stone steles, representing Viṣṇu and his retinue. Temple utensils, as lamps, vases, cruets, illustrate some of the Brahmanic religious customs. Caste-marks give opportunity for the explanation of the caste system, which plays such an important part in the religious, political and social life of India. The contemplative and ascetic element of Hinduism is illustrated by a series of models of Yogins and ascetics in various attitudes.





Buddhism, the offspring of Brahmanism, is represented by a rich collection, filling two alcoves. There is any number of representations of Buddha, in bronze, stone, clam shells, and carved and lacquered wood, some of which have much art value. No less varied are the forms and attitudes. The Çākya sage can be seen in the Burmese, Sinhalese, Japanese and Tibetan conceptions of him; sitting in meditation, preaching, blessing, and even reclining. The hierarchy is represented by several images of *arhats* and monks. The elaborate ritual of Buddhism is illustrated by a large collection of musical instruments, cruets, candlesticks, rosaries, prayer-wheels, *dorjes* (*vajras*), etc.; while among the representations of Buddhist sacred edifices may be especially mentioned a magnificent model of the Wat Chang at Bangkok, Siam. One case is given up to the syncretistic and popular accretions to Buddhism in China and Japan. The sacred literature of Buddhism is represented by the Siamese edition of the *Tripitaka*, presented by the King of Siam.

Shintoism; the primitive national religion of Japan, which even now contests Buddhist supremacy in that country, is represented by a collection of shrines and their contents, as the *go-hei*, mirror, etc., and some votive tablets.



A Korean sorcerer's outfit and a collection of amulets complete the exhibit of religious ceremonial objects in its present status.









The National Museum also possesses a collection of objects belonging to Christian ceremonials, including some valuable icons, priests' vestments, croziers, altar coverings, chalices and other church paraphernalia, of the Eastern branch of the Church as well as of the Western. It is expected that in the near future a special alcove will be set aside for the exhibition of this collection.

The Name of the Ferryman in the Deluge Tablets.—By Mr.
S. H. LANGDON, Columbia University, New York City.

THE name of the ferryman in the Deluge Tablets has had a varied history. It was first read by George Smith, Ur-Hamsi, giving syllabic value to the first sign and ideographic value to the second. In the translation of Smith's book into German, by Hermann Delitzsch, the same reading was followed. Sayce, in 1880, read Nes-Ēa, on the basis of a bilingual tablet which he says Pinches had discovered and which explained the sign , nr, as meaning Nesu, a young lion. Sayce was also the first to give the reading Ēa for , which he says is never written  with five heads, as George Smith reads (passim). No one besides Mr. Pinches has given any evidence of the reading Nesu for . Sayce himself did not see the tablet; it is not mentioned in Brinnow's *Syllabar*, nor by any other scholar. Sayce's reading has been followed by no other editor.

Jensen, without comment, read Arad-Ēa in his *Cosmologie*, 1890. Jeremias in the same year, a little later, followed Jensen; and again two years later, in Roscher's *Mythological Dictionary*, he read also Arad-Ēa.

Prof. Jastrow followed in 1898, reading Ardi-Ēa. The reading ardu for  has no warrant other than its being a synonym of amēlu. The reading amēlu for  is certain. The only reading, therefore, warranted by known information is Amēl-Ēa.








The name of the boatman occurs six times in tablet X., written always   (nr followed by the sign with *four* heads). In tablet XI. the name occurs ten times, but the readings here do not agree. Column vi. lines 1 and 32 read , five heads; line 14 of column vi, , three heads [Haupt's Texts]. The name of the boatman of the ark in the time of the Deluge is commonly read Puzur-Bēl or Puzur Shadû-Rabû, "the one hidden from Bēl;" written    .

Now I mean to defend the following theses:





1. The original name of the boatman of the ark was Amêl-Bêl.

2. This was changed to Puzur-Bêl, for theological reasons, by the priests.

3. The name was changed to Amêl-Êa by the same influence.

It has been assumed on the basis of R. 44, 48c that the sign , with five heads, can be read Êa; but this is based only on the reading Amêl-Êa for  , that is, only in connection with this name. Now the readings Êa for  and Bêl for  are already clearly established. If, then, the popular name of the boatman in the original legend, Amêl-Bêl, with five heads, was changed to Amêl-Êa by the dropping of one head, it would not be unnatural for the reading Amêl-Êa to be given to the old way of writing, viz.  , by the scholars who composed the syllahars. This would account for the mistaken reading in R. 44, 48c, quoted by Brûnnow. The old reading Amêl-Bêl again occurs twice in Prof. Haupt's texts, which would prove either one of two things: (1) a cropping out of the traditional folk-name of the boatman, or (2) the giving of the name Amêl-Êa to the old reading without changing the reading itself.

In tablet XI. the story is told of how Bêl and other gods of the pantheon planned to destroy all men. Êa foils the plot by causing a boathouse to be built, and saves at least three persons, Šit-Napishtim and his wife, and Amêl-Êa the boatman. The story has been worked over by the priests. The accurate measurements of the ark, the rules for uttering incantations over the sick hero Gilgamesh, the attributing of the deliverance of men to Êa, the father of Marduk, patron deity of Babylon, all point to priestly influence working upon an original folk-legend of the destruction of the world by water. Šit-Napishtim's father is also called Kidin-Marduk in tablet IX. line 6.

In the plan of Êa, Bêl is deceived. The ark escapes his attention, it is literally "hidden from him" together with the voyagers, and thus Êa preserves men. By a slight change of the last sign, the part Bêl of the boatman's name is changed to Êa. If then, as I have supposed, the name was originally written  , either of two things may have occurred: (1) Either the priests played upon the sign  (as they had already upon the sign ) by using it as the last part of the epithet Puzur,

Specimens of the Popular Literature of Modern Abyssinia.

—By Dr. ENNO LITTMANN, Princeton University, Princeton, N. J.

AMONG the popular works written in the modern Semitic languages of Abyssinia, there are many which are of interest to us, while some are even of considerable importance. I give here extracts from a few compositions of this nature, written in dialects of Northern Abyssinia.

The first of these is a small book in the Tigray language, entitled, "Story of the Journey of an Ethiopian from Ethiopia to Italy," which was printed in the year 1895 in Rome. It is a very simple and natural tale of an African who never had left his country before. Its scientific value is mainly philological, but it interests us also from a human standpoint. In order to give an idea of the style in which the author, Fesha Giorgis, writes, I translate the passage where he describes his departure (p. 6, l. 10-24); adding, however, that in a few places the translation is not absolutely certain:

"Then I took leave of my friends and acquaintances. Some of them tried to keep me back(?), and some of them said unto me: 'You have been persuaded.' But I, having now decided to go, replied nothing to the talk of the people. And in the evening I started, according to the order of the major, to go to the steamer. And some of my friends accompanied me and came to the seashore, and there we took leave of one another. But when the separation took place, my nature trembled, and two of my friends began to weep together. When that happened we embraced each other again and I stepped into the boat. Until I reached the steamer, they stood on the seashore, to see me off. But I then, while turning my face towards them, until I came to the vessel, was not embarrassed. And when I had come on board the vessel, I waved to them with a white handkerchief. And they went away sad."

Going on, he describes his experiences in the Red Sea, the Suez Canal, the Mediterranean, where he has a very queer and disagreeable feeling, called with us sea-sickness; and finally in Naples and Italy.

Of quite a different character are two collections of texts in the Tigrë language, which are of great interest both for the history of the Semitic languages and for the history of Semitic thought and civilization. In the first place, a collection of tribal legends (*Stammesagen*) of the Tigrë people was published by Dr. Conti Rossini, in the *Journal of the Italian Asiatic Society*, 1901, under the title, "*Tradizioni storiche dei Mensa.*" The reading of these texts reminds us strikingly of the tribal legends of the Israelitic clans in Canaan. Each tribe derives itself through a long line of ancestors from a heros eponymos, who in a manner is a personification of the tribe. This is shown also in an interesting way by a fact of grammar, as follows: two prominent tribes of the Tigrë are *Mensä'* and *Mäyräy*, but their tribe heroes are *Mense'äy* and *Mäyräy*; that is to say, the adjective form expressing derivation or appurtenance is employed, just as though we had *יִסְכִּי* or *יַעֲקֹב* as names of persons, instead of *יִסְכִּי* and *יַעֲקֹב*, in the Old Testament. The single heroes are then as usual brought into relation to each other as brothers, cousins, father and son, and so forth. We see thus before our eyes, and in a mainly Semitic people, a process in development which in a similar way took place many centuries ago in the Hebrew nation. Of course traditions more or less like these are spread over almost all the earth, and on the other hand it is a little dangerous to compare times so remote from one another. But the Semitic character is so tenacious, and the elements of Semitic civilization, such as found for instance with the Bedonins, change so little in the course of time, that we are led to comparison wherever we find similar traces.

As a specimen of the Tigrë traditions I give here the story of *Mense'äy* and *Mäyräy*, the ancestors, or better, the representatives, of the *Mensä'* and *Mäyrä*:

"*Mense'äy* and *Mäyräy*, without dividing the estate of their father, left [their brothers] *Tör'äy* and *Hazötäy* and went to *Haigat*. And after that, they went out from *Haigat* to spy out the land, saying: 'Which will be the best for us?' [and they went] to *Erötä*. And after they had gone to *Erötä*, *Mäyräy* said unto *Mense'äy*: 'In this *Erötä* let us dwell, it is good.' And after that said *Mense'äy*: 'How can we dwell in this drought in preference to the two rainy seasons and the two harvests and the

two birth-times of the kine, [which are in Haigat]?' So he went down [thither] with his brother. And after that the mule of Mäyräy strayed, after they had gone down to Haigat. And Mäyräy and Mense'äy sought for the mule both of them together. And when they went after her, she was waiting for them in Erötä. Mäyräy said unto his brother: 'Thus hath the mule brought us again to our goal; let us dwell [here].' And as he did not yield to him, they parted. Mäyräy settled in Erötä and Mense'äy returned to Haigat. And each of them in his place begat children and grew rich. And when Mense'äy longed for his brother, he went to see Mäyräy; and Mäyräy likewise longing for his brother, went to see Mense'äy; and they met in Kaduat. And in the dark, each believing the other an enemy, they struck each other [with their lances]. But crying: 'This is my man, I am Mense'äy!' and: 'This is my man, I am Mäyräy!' they recognized each other, and embracing they expired together. And they were buried in Kaduat." The end of this story is based on the same element as the widespread legend of the two fighting brothers,¹ very closely related to that of the battle between father and son (Rustem and Zohrab, Hildebrand and Hadubrand).²

The second of the Tigrë collections is found in a manuscript sent to me this winter from Abyssinia containing 214 songs in the Tigrë language. It is the first collection of any size of Semitic popular poetry, excepting those in the Arabic language. Like the "*dūcān benī Hudhail*," we might call this a *dūcān welād Tigrë*. The poems furnish very valuable material for linguistic, metrical and ethnological studies. The first texts in Tigrë—the translation of the Gospel of St. Mark and of some Psalms, the *Tradizioni* published by Conti Rossini, and also these poems—are all of them the fruit of the industrious zeal of the Swedish missionaries.

Mr. Sundström, one of these energetic and indefatigable men, sent me also an introduction in Tigrë and Swedish to the first

¹ Cf. Eteokles and Polyneikes, Hildebrand and Asmund, and the Scotch ballad, 'The two Brothers' (Child, *The English and Scottish Popular Ballads*, No. 49).

² Cf. the exhaustive treatment of these questions by Dr. Busse, *Sagen-geschichtliches zum Hildebrandsliede*, in *Beiträge zur Geschichte der deutschen Sprache und Literatur*, xxvi., Halle, 1900.

poem, and copious notes in Swedish on the poem itself. Of introduction and poem I present here an English translation:

After the death of a certain chieftain, named David, a quarrel arose about the leadership; for the surviving son (Maḥammad) was said to be a weakling, whom they did not desire for a chieftain. It is a custom for the chieftain to have a special strong-sounding drum, at the sound of which all the male population of the village must gather at the council place, if any important matter is to be transacted. Without this drum no one can rule. Therefore the rival party succeeds, after some intrigues, in getting the chieftain's drum; and, while the legitimate successor is sleeping, installs its man as chieftain, and the drum sounds. The son of David wakes up, seizes the formidable sword Qaṭṭān, jumps over the enclosure of his house, and stands suddenly on the council place. He cleaves the poor drummer with the flashing Qaṭṭān, and then turns around to the bard, who is just singing the praise of the newly installed chief. Death before his eyes, the bard now sings, to save his life, the following song:

1. Not shall be despised in songs this Maḥammad, the son of Ġadāl.
2. His mother is not a slave, nor is his father a serf.
3. His mother is the legitimate wife and a princess; his father is king and ruler.
4. He is the offspring of Fekāk, the offspring of Nāwed; he takes tribute from the free as well as from the tributary.
5. He is the offspring of Claudius, the offspring of Theodoros; he keeps back warriors, horse and foot.
6. He is the offspring of 'Eġēl, the offspring of Ekked; the offspring of the strong owner of Qaṭṭān, [the precious sword].
7. He is the offspring of Ġāweġ, the offspring of Fekāk; the offspring of the strong chief, whom all obey.
8. He is a dark shouldered lion's whelp, no lynx nor hyæna.
9. He is [like] an irritable camel, that does not allow his nose to be pierced.
10. He is [like] a strong high-humped camel, that snorts wildly.

11. [Strong] like Mafarraḥ's boat and like the firm house of Gaḥtān's son.
 12. He is [like] the moon in the firmament; and [if he were] flour on the millstone,
 13. Who could make it to bread and eat it? It were a deadly poison.
-

After the manuscript of the preceding had been sent in to the editors, I received a more complete version of this same poem, with more notes and a Tigrē-Swedish vocabulary by M. Sundström. An edition of this very valuable piece of work with a translation of the whole into German will soon be published.

Notes on the Old Persian Inscriptions of Behistun.—By
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Bh. I. 65, *vītaibiš* 'omnia.'

ONE of the most difficult cruxes in the Old Persian inscriptions is the passage Bh. I. 64–66, *adam niyutārayam kāradyā ubi-čariš gaibāmēā māniyamēā viθibišēā tyādiš Gaumāta hya maguš adinā*. Two years ago, in *AJPh.*, xxi. 16–18, I suggested as a translation of these words: 'I restored to the people the servants(?), and the live-stock(?), and the real estate, and the private property(?), of which Gaumāta the Magian had deprived them.' While the article mentioned was in press, a paper by Justi treating of the same passage appeared in *ZDMG.*, liii. 89–92. He rendered the crux by 'das Besitztum, die Dienerschaft, Hof und Haus nahm er ihnen.' He adopted the reading (*h*)*abāčariš* instead of *ubičariš*, with which I have been unable to agree, despite Rawlinson, *JRAS*, O.S., xii., p. ii., and he compared *māniyam* with the Cretan gloss of Hesychios, *μνῆα* · *δουλεία*, instead of YAv. *māna*, GAv. *dāmāna* (cf. *AJPh.*, xxi. 17). Justi's conclusions were criticized by Foy, *ZDMG.*, liv. 341–355 (cf. also *KZ.*, xxxvii. 551–553), who returned to the reading *ubičariš*, which he, however, like Spiegel,¹ connected with New Persian *čarādan* 'to pasture' and translated 'Weideland,' while he rendered *māniyam* by 'Gebäude.' After a renewed study of the passage and careful reading of the contributions of Justi and Foy, I find myself still adhering to my old view concerning *ubičariš gaibāmēā māniyamēā*. With regard to the fourth word, read *viθibiš* by Weissbach and Bang, I have changed my explanation materially. My old rendering 'private property(?),' *AJPh.*, xxi. 17–18, where former interpretations are collected, is criticized by Foy, *ZDMG.*, liv. 374, but his own discussion of the word, 349–355, seems to me altogether untenable. From the *v'θ'ib'āiṣ'ēā* which Foy adopts instead of *v'θ'ib'āiṣ'ēā* he evolves *v'(i)θ'ib'āiṣ'ēā* or *v'(i)θ'ab'āiṣ'ēā*, i. e., *v'(i)θ'ab'āiṣ'ēā* or *v'(i)θ'a-*

¹ Bartholomae, *Altiran. Wtb.*, 1889, favors the same etymology.

hišačāš-čā, 'Geschlechtsgefölgenschaft (das sind: "die Gefölgslente der adligen Häuser").' With a conjecture at once so bold and so unnecessary I cannot agree.

I believe that the true reading and root-meaning of *v'(i)θ'il'iš-ia* is that which is adopted by Bartholomae, *Grundr. der iran. Philol.*, i. 226, *viθaibiščā*. This view I have already put forth in *J.A.O.S.*, xxi. 181-182, when discussing the phrase *hadā viθaibiš bagaibiš*, which I believe to mean 'with all the gods.' Foy, 350, raises an objection to the form adopted by Bartholomae and myself, but his remarks seem open to criticism. 'Vor allem spricht dagegen,' he writes, 'dass *v'iθa-*, *v'isa-*, *v'ispa-* "all" stets plene geschrieben ist und nur *v'(i)θ-* "Haus, Heimat, Geschlecht" in der Behistaninschrift stets defektiv. Da nun sonst keine andren Wörter ausser Namen defektiv geschrieben werden, so muss im Anfang von *v'θ'v'iš-* das Wort *v'(i)θ-* "Haus, Heimat, Geschlecht" stecken.' Why the orthography of the proper name *Vištāspa*, to which Foy evidently alludes, cannot be called into service here, I do not see. The Behistun inscription shows the scriptio defectiva *v'(i)štāspa* in all instances of the word (cf. Rawlinson, *J.R.A.S.*, O.S., x., pp. xl., lxx.). Contrariwise, in all other inscriptions (excepting the late text Art. Pers. a 19), namely, Dar. Pers. a 4, Dar. Pers. e 4, Dar. Elv. 14, NR. a 12, Sz. h 6, Art. Sus. a 3, we have the scriptio plena *v'ištāspa* throughout. In exactly the same way the Behistun text has the scriptio defectiva *v'(i)θ'il'iš-*, i. e., *v'iθaibiš*, while Dar. Pers. d 14, the only text other than the Behistun inscriptions where the word occurs unutilated, shows the scriptio plena *v'iθ'il'iš-*, i. e., *v'iθaibiš*. I have, therefore, no hesitation in adopting Bartholomae's reading *viθaibiš* on the analogy furnished by the double orthography of the name of Hystaspes.

I now turn to the meaning and construction of the word. The rendering is fixed, I think, by the phrase *hadā viθaibiš bagaibiš* 'with all the gods,' Dar. Pers. d 14, 22, 24. It is plain, furthermore, from previous discussions of the passage, that *viθaibiščā* is parallel in construction with *abiciš gaitāmēā*

¹ Tiele, *Geschiedenis van den Godsdienst in de Oudheid*, Amsterdam, 1901, p. 361, maintained the old view still, as he wrote: '*hadā bagaibiš viθiibiš*' bedeutet zeker 'met de goden van den stam,' of misschien 'van het (konings-) huis.'

mānujymēd. Bartholomae's earlier view, *Ar. Forsch.*, ii. 104, that the word is an instrumental plural used as an accusative, is the one which I hold now as I held it in my former paper (cf. also my explanation of the instrumental plural *rauēabiš* as a nominative in *rie. rauēabiš θakatā āhu* '14 days were in course' and similar phrases, *A.JPh.*, xxi. 10). My 'kühne und bequeme Annahme,' as Foy, 374, calls it, that the instrumental plural may be used as an accusative and nominative, is not without arguments in its favor. It seems to me almost impossible to deny that the Iranian possesses many other instances of this very usage. Collections of material on this subject may be found in Hübshmann, *Causalehre*, 265-66, Spiegel, *Vgl. Gr.*, 428-429, Jackson, *Av. Gramm.*, § 944 (unpublished, read in proof-sheets). That these forms, e. g., *Av. staotaiš, dāuqan sraēšāiš, dāuqan wiyāiš, dāuqan vīspāiš, satāiš, vūēdyāiš*, are real instrumentals¹ and not, as Johannes Schmidt, *Pluralbild.*, 259-275, argued, forms with a nominative-accusative neuter plural suffix -iš seems clear for several reasons. First, not only neuters but masculines are found in this construction, e. g., *sraēštrāiš, azdibiš, adzabiš*. Second, Schmidt himself, 272-273, admits that such a formation in -iš is unknown outside the Iranian. Third, the instrumental plural used as nominative-accusative agrees with the use of the instrumental singular as nominative (cf. Caland, *KZ.*, xxxi. 259-261, Geldner, *ibid.*, 319-323, Bartholomae, *Sprachgesch.*, ii. 124-125, *Grundr. der iran. Philol.*, i. 134, Jackson, *Av. Gramm.*, § 945 [unpublished]). Fourth, the syntactic usage may, I believe, be explained more easily than Delbrück, *Vgl. Synt.*, i. 232-233, seems to think.

For the use of the instrumental singular as nominative, Bartholomae, *Sprachgesch.*, ii. 124-125, has, in my opinion, found the correct explanation. Other Indo-Germanic dialects offer parallels for the employment of the instrumental as accusative. The germ of the usage in Iranian is to be found in such phrases as Vd. 6. 49, *kva narān īristanān azdibiš barāna ahura mazda kva nidaθāna* 'where bear we the bones of dead men, O Ahura Mazda, where deposit them?', Vd. 4. 5, *θriš satāiš haδa-ēiθanān*

¹ The instrumental plural seems to be used at least once in the Gāthās as a nominative, Ys. 28. 2, *āyaptā ašāt haδa ydiš rapantō daidiēt x'āθrē*, 'hoons in accordance with righteousness which are to place the rejoicing ones in glory.' The passage is not, however, altogether certain.

narqra nabānazdištaqra jarn-haruti 'he brings three hundred like penalties to the nearest kin.' From phrases like these comes the later complete equivalence of instrumental and accusative, e. g., Ys. 55. 1, *rīšrā gāθāšcū tanruscū azilahišcū uštan-
qscū kahrpasū tawīšīšcū hawdāscū urvānanēu fratrokīmēu paitirēa
dualmahī ācū enēdagamahi* 'all creatures and bodies and bones and frames and forms and power and intellects and soul and fravashi we both exalt and proclaim,' Yt. 8. 33, *avi asā avi
zāiθrē urī karšnuu gāiš hupā* 'over seats, over abodes, over the seven zones.' The Slavic and Germanic dialects offer close parallels to this usage. Slavic especially employs the instrumental of means with verbs of motion used intransitively which take the accusative when they are transitive. Thus we have Old Church Slav. *visi narodi verze kameniženū* 'omnis populus jecit lapidibus' beside *vrūzi kameni na nīa* 'τὸν λίθον ἐπ' αὐτῇ βάλετω.' The usage is less common in Germanic, although instances are not lacking in Gothic, Old Norse, and Anglo-Saxon, e. g., Goth. *usreairpum ianda ut us þanana weina gurdy*, 'ἐξέβαλον αὐτὸν ἔω τοῦ ἀμπελῶνος,' Mark 12. 8 beside *utreairpunduns ianda ut us þanana weinagarda*, Luke 20. 15. Examples of the use of the instrumental beside the accusative are found also in Greek and in Sanskrit. For further literature and examples I may refer to Delbrück, *Vgl. Synt.*, i. 257-260, Andouin, *Détermination dans les langues indo-européennes*, 19, 85-86, 179, 273-274, 371, Miklosich, *Vgl. Gram.*, iv. 695-700. It seems to me, therefore, that we are fairly entitled to assume that the functions of the instrumental of means approximated those of the accusative of the direct object in connection with certain verbs in Iranian as well as in Sanskrit, Greek, Germanic, and Slavic, and that by analogical extension the instrumental was frequently substituted for the accusative both in Old Persian and in Avestan. The syntactic usage which I here presuppose does not, therefore, rest merely on its likeness to that of the Avesta, where corrupt transmission of text may frequently be a source of seeming abnormality in syntax, but on the broader basis of comparison with other dialect-groups of Indo-Germanic. I also regard *viduibiš*, for reasons stated above, as meaning

¹ I purposely omit instances of the accusative after $\sqrt{\text{bar}}$ as being too frequent to require notice.

'all,' and I accordingly now render Bh. i. 64-66, 'I restored to the people the servants(?) and the live-stock(?) and the real estate and all things(?) of which Gaumāta the Magian had deprived them.'

Old Persian *tucam kâ* : Doric *kā*.

The phrase *tucam kâ* is found five times in Old Persian, Bh. iv. 37, 41, 67, 70, 87. Its Babylonian equivalent is *mannu attu* 'quisque tu,' Bh. 105, while the New Susian has *ṁni ṁakku* 'tu qui,' Bh. iii. 63-64, 66, 83, 84, 94. The old explanation of *kâ* as a vocative singular masculine (e. g., Spiegel, *Keilinschr.*², 213) can hardly be maintained, and Kern's view in Caland, *Synt. der Pron.*, 47, that *kâ* . . . *hya* is the Old Persian equivalent of Sanskrit *yañ kacyat*, seems equally untenable. Bartholomae, *Literaturbl. f. or Phil.*, i. 17, *Grundr. der iran. Philol.*, i. 235, is on the right track when he regards *kâ* as a particle. On the other hand, it does not seem to me that *kâ* is equivalent in meaning to *ye* or is even a mere interjection as he has suggested. The Old Persian word is rather to be compared with what I regard as its exact correspondent in Greek, Doric *kā*, Indo-Germanic **gā* (cf. Brugmann, *Gr. Gr.*³, 543-544). A few examples will be sufficient to show that *kā* has, sometimes at least, a generalizing force. Theok. xi. 49, *τίς κα τῶνδε θάλασσαν ἐκὼν καὶ κύματ' ἔλοιτο*; xviii. 57-58, *νέμεθα κάμμες ἐς ὄρθρον, ἐπεὶ κα πρῶτος δοῖδς ἐξ εἰνᾶς κελადήσῃ ἀνασχὼν εὐτρίχα δεῖράν* or Arist. *Acharn.* 799, Δ. *τί δ' ἐσθλὲι μάλιστα*; M. *πάνθ' ᾧ κα διδῶς*. I therefore think that such a phrase as *tucam kâ sšāyathiya hya aparam ahy*, Bh. iv. 37, should be translated, 'thou whosoever shalt be king hereafter.'

Bh. iv. 44: RV. II. 17. 7.

Weissbach-Bang's reading *Auramaz[diya] taigiya* in Bh. iv. 44 is very doubtful. Rawlinson's copy (cf. also *JRAS.*, O. S., x. p. lix.) has merely *Auramaz[dā]* and a blank space. On this

¹ Old Persian *viša* is to be compared with Old Church Slav. *visi*, Lithuanian *visas*, Indo-Germanic **wik-o-*, while I still hold to my former explanation of Old Persian *viša* beside *višpa*, Indo-Germanic **wik-ya-* as due to *sp>s(s)* (*AJPh.*, xxi. 7, see now Salemann, *Grundr. der iran. Philol.*, i. 263). With the view of Foy, *KZ.*, xxxvii. 333, that *viša* is from Indo-Germanic **wis-ko-*, I am quite unable to agree.

he remarks, xii., p. vi., 'The word between *Auramazdā* and *yathā* is certainly either *maiyya* or *taiyi*, the initial character being the only one subject to doubt.' Spiegel reads accordingly *Auramaz[dā] taiyi*. Fr. Müller, on the other hand, *WZKM.*, i. 59-62, preferred *Auramaz[dā] maiyya*. Neither the New Susian nor the Babylonian texts help us here. The Babylonian *issā* (Bh. 98) would seem to point to *upastā* or *upastām* in the Old Persian version, but according to Rawlinson's copy there is no room for such an insertion. On the other hand, the New Susian text (Bh. iii. 68) does not here contain *pikta*, the equivalent of *upastā*. Perhaps the *Uramašta-ra* of the Susian tablet would lead us to infer some such form as the *Auramaz-diya* adopted by Weissbach-Baug (cf. also Weissbach, *Achämenideninschr. zeit. Art.*, 53-54, Oppert, *Le peuple . . . des Mèdes*, 56-57, and against this Foy, *ZDMG.*, lii. 565, whose suggestions, however, both here and in *KZ.*, xxxvii. 539, I am quite unable to accept). In my own judgment it is possible to retain unchanged the reading of Rawlinson, especially since the Babylonian and New Susian versions do not exactly coincide in the passage under discussion.' My own suggested reading of the text is *auramaz[dām. iyaiy^a.]*, i. e., *auramaz[dām iyaiy]*. This preserves exactly Rawlinson's final results, it may be explained grammatically, and it seems to keep the general sense demanded both by the context and, apparently, by the Babylonian and New Susian versions. In my view *iyaiy* is the first singular middle of *i* 'to go,' where the termination is the same as in the imperfect (cf. for the present GAv. *dadā* 'I place,' YAv. *daide*, Skt. *dadhe*, and for the imperfect Old Persian *avahi* 'I carried,' Av. *haire* 'I bore,' Skt. *avahe* 'I carried'). The passage *auramazdām iyaiy yathā ima hašiyam naiy durux-tam* then signifies, 'I betake myself to Ormazd as this is true, not false,' or, more freely, 'I call Ormazd to witness that this is true, not false.'¹ If the reading and interpretation here suggested be possible, there is an interesting parallel in RV. ii. 17.

¹ Several other instances of slight divergence in the different versions of the Achaemenian inscriptions are too well known to require recapitulation here (cf. Weissbach, *Grundr. der iran. Philol.*, ii. 73-74).

² My previous rendering, *JAOS.* xxii. 172, should be changed accordingly. I still think it just possible, however, that *yathā* here introduces a clause of indirect discourse.

7a which should be cited in this connection. The Vedic passage in question contains the sole instance thus far noted of the first singular middle of *i* in Sanskrit. The line is as follows: *amājār iva pitrōḥ sārēḥ satī samāndā ā sūdasas tvām iye bhāgam* 'as a girl maturing at home dwelling with her parents, from the joint abode I betake myself to thee for weal.' The words *tvām iye bhāgam*, which are important for the suggested reading of the Old Persian passage, are thus glossed by Sāyana: *stotāham bhagam bhajanīyam dhamam tvām iye . . . tvām yāce*. I see no very great semantic difficulties in a development of meaning from 'I go, betake myself, to Ormazd' to a practical equivalent of 'I call Ormazd to witness, so help me Ormazd.' Certainly all epigraphical and grammatical requirements seem to me to be met by such a suggestion.

Bh. iv. 46, *avāḫ*.

The general sense of Bh. iv. 46 is clear both from the Old Persian and New Susian versions, the Babylonian being lost here. The third word of the line in the Iranian text is, however, mutilated and doubtful. Rawlinson in his copy reads this word and the one before it *aura[mazdāhu. tyu]maiya* (cf. also *JRAS.*, O.S., x., p. xviii., lix.-lx., 247), but in his revisional note (xii., p. vi.) he says that the last four characters are certainly *am¹iy²*. Weissbach and Bang read *api]maiya*, thus substituting *i* for Rawlinson's *a*. But this can scarcely be the intensive *api* (cf. their translation by 'anch'), for that word occurs in the inscriptions only as an enclitic in the single phrase *duraiya apiy* or *duraiapiy*. I would suggest the reading *avā*, which thus gives *avāmaiya*. This *avā* is the ablative singular neuter for **avāḫ*¹ governed by *maiyašēiy*, which should take the ablative in Old Persian as it does in Avestan and Sanskrit (cf. Jackson, *Av. Gramm.*, § 965, n. 1 [unpublished, read in proof-sheets], Speijer, *Sansk. Synt.*, 78-79, Delbrück, *Vgl. Synt.*, i. 216). The meaning of *maiya* is fixed by the New Susian rendering

¹ On the loss of final *t* in Old Persian see Bartholomae, *Grundr. der iran. Philol.*, i. 183, Foy, *KZ.*, xxxvii. 500-501. In passing I may note regarding Foy's criticism of my view of *tyand*, Bh. i. 23, as expressed in *AJPh.*, xxi. 12-13, that *datā* is evidently plural, not singular (cf. the Babylonian rendering *dēndatu*, Bh. 9). We should therefore expect *tyānā* instead of *tyanā* if his view were correct.

ânuua (Bh. iii. 70) and the enclitic pronoun thus stands in its proper position after *avât*. The passage Bh. iv. 46-47, *vašnâ auro[mazdâhu av]ânuuîy uniyakšîy vasiyastiîy kartam auv avahyây[â dipigâ] natîy nîpâšîtam* is then to be rendered, in my judgment, 'by the grace of Ormazd much more than this was done by me. This is not written on this tablet.'

Old Persian *duvitâtaranam* : **Old Church Slavic** *davě*, **Greek** *dîp*.

The word *duvitâtaranam* occurs twice, Bh. i. 10, a 17, in the Old Persian inscriptions in passages where no help is given by the Babylonian or New Susian versions. The latter text has indeed (Bh. i. 7) *šauwak-mar* corresponding to *duvitâtaranam*, but as the New Susian word also is a ἀπ. λεγ., it is useless for interpretation (cf. however, Foy, *ZDMG.*, lii. 590). Early conjectures on the meaning of the Iranian term are collected by Spiegel, *Keilinschr.*, 83-84. The second component is obviously to be compared, so far as etymology goes, with Sanskrit *taruna* 'crossing' (so already Benfey, *Keilinschr.*, 8). The word seems to mean 'for a long time, from days of old' (cf. Justi, *Grundr. der iran. Philol.*, ii. 417 and his references there; see also Rawlinson, *JRAS.*, O.S., x. 197, Benfey, *Keilinschr.*, 8). Bartholomae, *Grundr. der iran. Philol.*, i. 151, returns to the older rendering, best defended by Oppert, *Le peuple . . . des Mèdes*, 113, 163, and adopted by Weissbach and Bang, 'in doppelter Reihe.' The historical difficulties in explaining the passage if *duvitâtaranam* has this meaning, are too considerable so be lightly overlooked. I incline, therefore, to the rendering 'from time of old,' especially as I think this can be justified etymologically. The latest discussion of *duvitâtaranam* is by Foy, *KZ.*, xxxvii. 546, who still adheres to his comparison with Latin *dinturnus*. Such an equation seems to me impossible. Whether Latin *dîa* 'by day, long' stands for **dioy-i* or for **dîēu* (cf. Brugmann, *Grundr.*, i.³ 910, Stolz, *Lat. Gramm.*, 131, Sommer, *Lat. Laut- und Formenl.*, 160), it seems clear, at any rate, that just as *din-rnus* is after the analogy of *noctur-nus* conceived as **noctu-rnus* (Stolz, 77), so *din-tarnus* is analogical to the same *noctur-nus* divided **noe-tarnus*.¹ With *dinturnus*, then, *duvitâtaranam* has nothing to do.

¹ For further hints on the influence of *nox* on *dies* in Latin, see Sommer, 429, Schrader, *Reallexikon*, 845-846.

The first component of the Old Persian word is to be compared with Greek *δηθά, δηρόν, δήν*, Doric *δο(ε)άν* (Alkman, frag. 135, ed. Bergk),¹ El. *δάν*, O. Ch. Sl. *darē* 'formerly,' *darānā* 'old,' Armenian *terem* 'I continue,' Latin *dū-rus, dū-dum*, Sanskrit *dā-rā* (see Fick, *Vgl. Wtb.*, i.² 624, ii.² 383, Hirt, *Abhand.* 104, Hübschmann, *Armen. Gramm.*, i. 497, Prellwitz, *Etm. Wtb.*, 74, Brugmann, *Gr. Gr.*² 251). The same phonetic change is found in this equation as in the comparison of Old Persian *davitā* 'second,' with Sanskrit *dvitīya*, Greek *δῆς*, Old Latin *duis* (Pauli excerpta ex Festo, ed. Th. de Ponor, 47). I consequently feel little hesitation in rendering *davitātaranam* 'throughout a long period.' I think, furthermore, like Foy, that we are entitled to compare the Old Persian word with the Vedic *dvitā*. Geldner, *Ved. Stud.*, iii. 1, has very recently expressed himself as unfavorable to this view, apparently on semasiological grounds. Yet it would seem that the underlying force of *dvitā* as he has outlined the usage of the term, 1-10, may well have been 'long, continuous, firm,' whence were derived the meanings he assigns the word on a basis of Vedic philology and the native commentators. Until a better etymology shall have been suggested for *dvitā*, I should certainly prefer to compare it with Old Persian *davitātaranam*, and both these words with Old Bulgarian *davē*, Greek *δῆν*, and their cognates.

¹ For *δῆν* = **δῆν* cf. β 36, οὐδ' ἄρ' ἐν δῆν ἥστο. The phrases Armenian *tevoy* 'forever' and Old Bulgarian *izū davina* 'from olden time' may also be noted in this connection. Cf. further Kern, *ZDMG.*, xxiii. 222-226, Osthoff, *Etym. Parerga*, i. 114-115.

The Āradā-tilaka Tantra.—By Dr. ARTHUR H. EWING,
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DR. RĀJENDRA LĀLA MITRA once expressed the opinion that the Tantras constitute the life and soul of the modern system of Hinduism.¹ While Tantra literature has made its way all over India from Tibet to Madras, it is chiefly to Bengal that it owes its origin. The writer just quoted, in his "Notices of Sanskrit MSS.," vol. iii. p. xiv, points out that the Tantras have always held the field against the Vedas in the province of Bengal. Bengali Pundits have no Vedic MSS.; this he believes to be due to the fact that "Bengal has never been the seat of a Vedic School, and consequently it has never been taught there, nor MSS. prepared and preserved." These and other facts regarding the importance of the Tantras, especially in Bengal, are to be found in a recent pamphlet by Dr. K. S. MacDonald, of Calcutta, entitled, "Whether Tantra or Veda in Bengal?" The same writer has also published information regarding Tantric literature in N.W.P. and Oudh, in Mysore and South India, and other pamphlets are in the course of preparation regarding the said literature in other provinces.

The close relation of this branch of Sanskrit literature to the every-day religion of millions of Hindus, furnishes an adequate reason for careful inquiry into the contents of the various Tantric productions. Such inquiry is now being carried on under the leadership of Dr. MacDonald, at whose request work on the Āradā-tilaka was undertaken.

The Āradā-tilaka appears as No. 160 in Aufrecht's "Catalogue of Sanskrit MSS. in the Bodleian Library." He there gives a brief outline of the contents and adds, "Āradā-tilaka (Yāmala alone being excepted) holds the first place among the mystic books; and, unless I am mistaken, surpasses the rest in point of antiquity."

The Title.

The meaning which the word 'Āradā' is here intended to convey is not certain, but it is probably used as a name of

¹ Compare what is said in *Indo-Aryans*, vol. i. p. 404.

Saraswatī, who stands first in the list of deities worshipped in connection with various Mantras in the body of the book, i. e., from chapter vi. to chapter xxiii. The word *Āradā* is not found in the 108 Upanishads which are tabulated in Jacob's Concordance nor in the *Amarakoṣa*. It is, however, found as a name of *Samswatī* in *Trikāṇḍageśa* i. 1, 27. '*Āradā*' is also the name of a kind of Sanskrit character, e. g., the Kashmirian *Atharva Veda* is written in the *Āradā* character. Here again the reference, as Weber has said, *IS.*, xiv., p. 405, is doubtless to *Saraswatī*, who is the tutelary goddess of speech and learning.

The Author.

At the close of the work, in chapter xxv., the author is stated to be *Lakṣman*, the son of *Lakṣmī*, who received it from *Śrī Kṛṣṇa*, who received it from *Vāruṇendra*, who received it from *Mahābala*.

General Character of the Tantra and Points Worthy of Mention.

1. The *Āradā-tilaka* is practically free from reference to the licentious practices which, marking the so-called "left-handed" *Āktas*, have done so much to bring them into disrepute. The only exception is in the general references to the power of certain Mantras to bring women under control and to compel them to come where they may be wanted, e. g. ix. 100; x. 25, 70, 95, 96, 111, 145.

2. The *Sāṅkhya-Yoga* terminology prevails in the book; the last chapter is devoted to *Yoga* by definition, xxv. 1.

3. The larger part of the book is devoted to the making and handling of Mantras and Yantras. It follows from this that the work is full of sorcery practices, being therein the lineal descendant of the *Atharva Veda*. Sorcery appears in its beneficent and terrible aspects. On the one hand, the Mantrin, by proper practices, can obtain almost anything that the heart may wish; on the other hand, he can kill or enable a man to kill his enemy. This is the chief blot upon this Tantra.

The technical word for this sort of thing is given in xxii. 1, viz. *gatruvinimardana*, or killing of enemies.

The *Atidurga-Mantra* of chapter xxii. has this as its definite purpose. Other Mantras also are used in the same way. The following are some concrete practices referred to:

(1) The Vāyn Yantra, buried by the door of an enemy's house at night, will bring about his death unless he makes haste to leave it, vii. 54, 56. Compare for a similar use and effect of other Yantras, xi. 63 and xxiv. 29 ff. What a magnificent situation this creates for a sort of reign of terror!

(2) An image, i. e., effigy of an enemy, is made of a certain kind of wood, and it is then cut to pieces, the enemy thus becoming "a guest of death" (*Kālātithi*), xi. 100, 108. See also xxi. 95 ff. The defeat and death of enemies are again and again attributed to the Mantra in xi. 62-128.

(3) A young deer is taken as a symbol of an enemy and then killed and flung away, xvi. 24. Cf. xvi. 90.

(4) A goat is taken as a symbol of an enemy and the goat is killed, xx. 129.

(5) Messengers are sent to take the life of enemies, xxiii. 94, 95.

(6) Agni is besought to kill a man, xxii. 142; indeed, chapter xxii. is so full of this sort of thing as to make quotation impracticable.

4. Aufrecht's opinion that *Çāradā-tilaka* surpasses the other Tantras in antiquity seems doubtful from the statement which the book gives of itself. In i. 4 its purpose is said to be to give the essence, *sāra*, of all the Tantras and the method of Yantras and Mantras. Such a claim could hardly be made unless other Tantras were in existence. In fact the book seems to be a compilation. Chapters vi.-xxiii. make up the body of the book and bear a common character. The early chapters establish the theory of Mantra formation and describe what is preparatory or collateral. In the same way the two closing chapters are additions regarding Yantras and Yoga. On the other hand, it may still be that of the Tantras now in existence the *Çāradā* is one of the oldest. Anything like accuracy here will depend upon further investigation.

Certain of the works classed as Upaniṣads clearly belong to the same stratum of literature as the Tantras, at least if *Çāradā-tilaka* be taken as a fair representative of the latter class. The *Rāmāpūrvatāpaniṣa* and the *Nṛsiṅhapūrvatāpaniṣa* Upaniṣads contain the same sort of material as the *Çāradā* does and both are equally far removed from the early Upaniṣads. Again, the use of the word *Çakti* in *Ātharvaçiras*, *Kālāgnirudra*, *Haṁsa* and *Nyāsa* Upaniṣads serves to locate them approximately in the same sphere of literary production.

5. An important feature of this Tantra is its references to the goddess Kuṇḍali.

The Tantras, as is well understood, set forth the religion of the Śāktas, i. e. of those who believe in and worship the supreme female energy, i. e. Śakti. In this Tantra, Kuṇḍali is the personal name chosen to describe this supreme Śakti, active both in man and in the universe.

The following are the chief references to her nature, her place and her activities:—

(1) On the one hand, she is identified with Śahdarāhman, i. 14, 55; she is called Paraśakti, i. 53; and Paradevatā, i. 56; xxv. 34; and Ādhāra-śakti, iv. 57; she is praised in many stanzas of chapter xxv. and given the attributes of all the gods and goddesses, xxv. 64 ff.; she is identified with Om, thus: Om equals Piṇḍa, Kuṇḍali equals Piṇḍa, therefore the two are equal, and this is equivalent to identifying her with Brahman, xxv. 65.

On the other hand, her form is given as the form of a serpent, i. 54. Note that in Amarakoṣa *kuṇḍalin* is one of the synonyms for serpent.

(2) She dwells in the middle of the body (*dehamadhyagā*) of all living (breathing) creatures, i. 14.

Again she is manifested in the trunk of the body (*ādihāra*) as Paraśakti, i. 53. References to her coming forth from the *ādihāra* are found in xxii. 3, 49, 50. Again as Paradevatā she is said to dwell in the midst of a knot in the *ādihāra*, from whence the veins go out, xxvi. 34. Further in xxv. 67 she is said to move in the midst of the Sūṣūṃpā vein.

(3) She creates the world. This is put in the following ways:—First she is said to be multiplied (*guṇita*) in the bodies of all creatures, i. 56. Further, it is said that she, having awakened to the fact that she is endowed with the essence of all things, creates the Mantra-endowed world, i. 57. The details of the above declarations are then given. She manifests herself in all singles, all doubles, all triples and so on up to twelves, then in twenty-fours, then in thirty-twos, then in thirty-sixes, then in forty-twos and then in fifties. The various phenomena of the visible world are gathered under these groups, i. 58–109.

Again she is said to aid in the destruction of an enemy, xxii. 3. Further, she is said to go out by the Brahmarandra, xxii. 50.

Further, the origin of all letters is attributed to her. The

series is as follows:—*Śakti*, *dhvani*, *nāda*, fire, half-moon, *bindu*, *parā*, *paṣṣanti*, *madhyamā*, and *vāikhari*, i. 110–116.

As to the origin of the name, this Tantra furnishes by inference a very interesting suggestion. In the construction of the *maṇḍapa* or temporary temple, given in chapter three, instructions are laid down that in each of the eight quarters, N., N.E., E., S.E., S., S.W., W., N.W., the earth should be scooped out in the shape of a *kuṇḍa*, i. e. a shallow earthenware vessel, iii. 48. Then in the center of each *kuṇḍa* the earth should be formed so as to represent the female organ (iii. 75), while in the center of this again a *piṇḍa*, or lump of rice or flour, should be placed to symbolize the male organ (iii. 78).

Now in iii. 90 the *kuṇḍa*-form is said to be the highest form of Prakṛti. May it not be confidently concluded that Kuṇḍali is simply another name for Prakṛti? and that the name is taken from the *kuṇḍa* formed in the sacrifice? The *kuṇḍa* contains symbols of procreating power and becomes therefore a fitting type of world-creation and so gives the name to the Paraśakti.

In describing the place of Kuṇḍali above, her place in the *ādhāra* or *mūlādhāra* was referred to. A question of some importance comes up here: Does *mūlādhāra* in this Tantra refer to the mystical circle (*maṇḍala*) just above the genitals to which it is referred in Pāñcatantra, or to the navel, which seems to be the meaning in the very Tantra-like Upaniṣad, Rāmāpūrvatāpaniṣya? While some of the above references are uncertain, they are, on the whole, best understood of the navel, especially the reference to a “knot” in the *ādhāra*, from whence the veins go out, xxvi. 34. To be sure, there is no necessary contradiction here, as the mystical circle above the genitals may easily include the “knot” of the navel. Another Tantra at hand corroborates the view that *mūlādhāra* in Tautrio usage means navel. Rāma Prasād, M.A., has translated for the Theosophists a Tantra which he calls The Science of Breath. He in his glossary naively says that the work is a single chapter of a lost book, entitled Īvāgama. The so-called chapter is really a translation of the work Svarodaya (see PW.). In section 32 Kuṇḍali is said to dwell in the navel like a sleeping serpent. The translator's note regarding Kuṇḍali is interesting, “Kuṇḍali is that power which draws in gross matter from the mother-organism through the umbilical cord, and distributes it to the different places where the seminal Prāṇa gives it form. When

the child separates from the mother the power goes asleep. She is no more wanted now. Upon the supplies of the Kuṇḍali depend the dimensions of the body of the child. It is said that it is possible to awake the goddess even in the developed organism by certain Yoga practices." *Nature's Finer Forces*, p. 194.

The Philosophy of Mantra Formation according to Ćarada-tilaka.

The starting-point is the Sat-cit-ānanda attribute-possessing (*saguṇāt*) Paramēgvara. From Paramēgvara *ṣakti* is produced—*sacchidānandanibhūvāt sakulāt* (i. e. *saguṇāt*) *paramēgvarāt āśīc chaktiḥ*, i. 6. From *ṣakti* comes *nāḍa*, i. e. the nasal sound represented by a semicircle and here put apparently for unmanifested sound. From *nāḍa* comes *bindu*, i. e. the dot representing *anuvāra*, i. 7. This *bindu* possesses the qualities of the highest *ṣakti* (*paraṣaktimayā*) and is itself made up of three parts, viz., *bindu*, *nāḍa*, and *bījā*. From the division of this highest *bindu*, manifested sound (*vara*) is produced. Sound which is thus created takes shape in letters and words. Letters and words form Mantras; hence Mantras incarnate, as it were, the power of Ćakti, which is the power of Paramēgvara. The Mantras as infolding the power of Paramēgvara become the media of world-creation. Kuṇḍali, who is the supreme Ćakti, is said to create the Mantra-endowed world. The five elements are said to have the five root-sounds as their cause, i. e. the elements are five because the letters are divided into fives—not the opposite, as one might more easily have imagined, ii. 10. The details of the explanation are so abundant as to be almost confusing. However, the above theory seems to be the idea at the basis of the details. It is easy to see the reason for such a theory. The Mantrin was determined to have his Mantras highly regarded and so he creates a theory according to which no power will be too great to attribute to them. Not that the idea originated with the Tantrics. Speech is a goddess of the Rīg Veda and the power of *brahman* or the "holy word" was recognized from earliest times. The Tantras are in this matter but a degenerate offspring of an honored parentage. The Brāhmaṇa with his *brahman* is the grandfather of the Mantrin with his Mantra. The one is sacerdotalism with a strong inclination to sorcery; the other is sacerdotalism immersed in an ocean of sorcery.

Other matters worthy of mention are:

(a) the *Nāḍis* or veins. These are said to be ten, the principal being *Idā*, *Piṅgalā* and *Suṣumṇā*, which are referred respectively to the left side and nostril, the right side and nostril, and the middle. The seven others are: 1. *Āmalhārī*, to the left eye. 2. *Hastijihvā*, to the right eye. 3. *Pāṇā*, to the right ear. 4. *Mūḍhasā*, to the mouth. 5. *Yāgasvinī*, to the left ear. 6. *Chūḥkhiṇī*, to the anus. 7. *Kukhā*, to the genitals.

Ten winds or fires are also given as present in the body, but it does not seem possible to locate them in the *nāḍis*. They are *prāṇa*, *apāna*, *vyāna*, *ulāna*, *śamāna*, *udāna* (connected with vomiting or belching), *kāma* (winking), *dharmāṇḍya* (enlargement), *kṛkora* (sneezing), *derahotta* (yawning), i. 40-44.

As to *Suṣumṇā* several points are given. (a) It is the *prāṇa* which goes up from the navel in five sections (*pr.*, *ap.*, *vy.*, *ud.*, *śam.*) and therewith pervades the body, i. 43. (b) By way of the *Suṣumṇā* the *ātman* is united with the *Paramātmān*, iv. 24. (c) By the way of *Suṣumṇā*, *tejas* comes from its own place (*svasthāna*), i. e. the heart, iv. 88; cf. *Praṇa Up.* iii. 9. (d) *Suṣumṇā* is in the backbone, xxv. 29.

(b) Moving life is of three origins: (a) from sweat, (b) from egg, and (c) from the embryo-sack, i. 29 ff. and 38.

(c) The seven *dhātus* or constituents of the body are skin, blood, flesh, fat, bone, marrow, and seed, i. 34. In vi. 7 and xxiii. 84 the last named is omitted.

(d) The body is said to be ninety-six fingers long, xxv. 27. The *prāṇa* is said to abide twelve fingers from the navel; cf. the reference in *Amṛtabindu Up.* 32 to measurements by thumb-breadths, and my discussion thereof in "The Hindu Conception of the Functions of Breath," *J.A.O.S.* xxii. 264.

(e) The *Sauṣkāras* in the history of the individual are as follows: *Garbhādhāna*, *puṁsavāna*, *śimantonayana*, *jāta-karman*, *nāmakarapaṇa*, *upanīṣkramaṇa*, *mnayaprāṇa*, *cāṇḍa*, *upanāyana*, *mahānāmya-mahāvrata*, i. e. *brahmavācīn*, *upaniṣada*, *gōḍānōḍāhakān*, and *mṛti* (v. 60 ff.).

OUTLINE OF CONTENTS.

Chapter I. The chief purpose of the first chapter is to set forth the theoretic basis of the science of Mantra formation and use. The argument has been briefly stated above. The

Sāṃkhya terminology is used. Such terms as *tanmātras*, *tat-tvas*, *mahātattvas*, *manas*, *buddhi*, *cit*, *aharikāra*, *mahat*, *avy-aktam*, *jñānendriyas*, etc., are used.

Chapter II. The subject of this chapter is stated to be to describe the utterance (*vyakti*) of sounds in the mouths of men. In other words, it is a natural progress upon chapter first. Sounds are said to be driven along through *Suzumūḍā* by the wind or breath, their starting point having been the personified Śakti who, as Kuṇḍali, dwells in the body (1).

Many gods and goddesses are named and are all called *sva-gaktis*, thus emphasizing the theory that sounds are creative forces (29-55). In an earlier verse (8) the vowels are called *śiva-gaktimayas*, i. e., possessed of the power of Śiva.

From verse 56 the description of Mantras begins. They are divided (a) as to gender; (b) as to character into good and bad (*krāra* and *sāmya*); and (c) into ready for use—*siddha*—and those yet to be perfected—*sādhyā* (56-62 and 130-131). The chief causes of Mantras being defective are (1) the too frequent occurrence of certain letters, and (2) the putting of said letters into the wrong place (111). A long list of defective Mantras precedes the above statement (63-110). Note that the restrictions are such that Mantra-making is not a matter to be lightly undertaken. They seem to have been made with a view to keeping the production entirely in the hands of a "Mantra Company, Limited."

The *Saṃskāras* for Mantra-formation are next given, and this is followed by a statement of the proper astrological conditions, and that again by a description of a magical diagram; cf. *Nṛsiṃha. Up.*, v. 2 (112-135).

The chapter ends with a description of the proper place, the food and the character of the Mantrin and also of the character of the disciple (138-154).

Chapter III. The subjects of this chapter are:

1. The preparation of the *āsana*, i. e., the ground where a sacrifice is to be performed (1-18).
2. Full details of the erection over the *āsana* of a *maṇḍapa* or temporary temple on the occasion of a religious festival; of the vessels used in the ceremony and the various grains put in them; and of the giving of food to the gods and demons (19-47).
3. The forming of *kuṇḍas* in the various squares of the *āsana* and a description of occult effects of the various shaped *kuṇḍas* (48-86).

4. The formation of *maṇḍalas* or charmed circles of conjurors (105 ff.).

5. The description of *pīṭhas* or pedestals upon which the gods are put (119 ff.).

Chapter IV. The aim of this chapter is to explain the consecration ceremonies or *dīkṣās* which must be performed preparatory to undertaking the specific acts of worship. First comes an account of what the Deṣaka must do from the time of his bath to his entering into the place of sacrifice, *ṣaṣṭhamandapa* (1-27). Then follows the ceremony of alternately reciting the Mantra of the occasion and touching parts of the body (28-66). After this comes the ceremony of *prāṇapratiṣṭha*, i. e., the putting of life into the idols and the objects used in the sacrifice (77-92). The chapter ends with a description of foot-rinsing, mouth-washing, and guest-reception ceremonies (93-96).

Chapter V. The subject of this chapter is the sacrificial fire. The production thereof is first taken up. Eighteen *Samśkāras*, i. e., sanctifying ceremonies, are mentioned in the beginning of the chapter and others later (1-6 and 43 ff.). The seven tongues of Agni are mentioned and these again divided into three sevens (20-28).

At the close of the chapter, fire is likened to a living creature with a head and other parts. The various colors of the flames have a specific sacrificial value; the sounds of the flames are also given (150 ff.).

Chapters VI-XXIII. With the close of the fifth chapter the introductory matter comes to an end and the author addresses himself to the description of various Mantras, as to their formation, use, and the results obtainable by them. The method of the Anukramayis is followed and the Ṛsi, the meter, and the divinity are given.

Chapter VI. The main Mantra here is called Varṇatanu, and the deity thereof is Saraswatī. It is made up of fifty letters and twenty-four *lipis*. The word *lipi* seems to refer to the sections of the Mantra; the body is to be touched in twenty-four places and the deity thus placed in it. The eight mothers, i. e., personified energies of the principal deities, are named and described (17 ff.). Five Mantras are manipulated (51-74). *Abhiṣekas*, i. e., bathings of the idols, and *mudrās*, i. e., inter-twinings of the fingers with supposed magical efficacy, are named and their effects given (75-111).

Chapter VII. The first half of this chapter is devoted to Yantras, i. e., annulets upon which Mantras are written. The chief one is called "Bhūtalipi;" a diagram of it is given (1-19).

Long lists of *śaktis* containing 16, 23, and 64 names respectively, are given from verses 20-50.

Akṣa, vāyu, agni, varuṇa, and *prthivī* Yantras are described (51-61).

From verse 62 the formation of Mantras begins again. The main Mantra is called *Vāgīśvarī* and the deity of it is *Vākya*. This is probably a return in reality to the *Sarasvatī* of chapter VI, who is the goddess of speech. In the latter part of the chapter there are frequent references to obtaining skill in speech. The chapter closes with a list of things forbidden to a Mantrin.

Chapter VIII. Formation, use and value of Lakṣmī-Mantras. At verse 37 a new Mantra is mentioned called the *Aṅga-Mantra*. From 141-3 the formation of a Yantra is described. This is followed by another Mantra of 27 letters (144-146). The chapter closes with a list of things forbidden and allowed to the Mantrin (149-167).

Chapter IX. The goddess of the Mantras of this chapter is Bhuvanēśvarī. Various Mantras are formed and gods and goddesses worshipped in the different quarters (1-33). The *śaktis* of Bhuvanēśvarī are then given and this is followed by the formation of three Yantras (34-94). The chapter ends with a statement of the wonderful powers of the Mantra (95-108).

Chapter X. The name of both the Mantra and the goddess of this chapter is Tvaritā, a title of Durgā. Both Mantras and Yantras are formed (1-42). The ten *śaktis* of Kāmadeva are mentioned in verse 69. Here also wonderful powers are attributed to the Mantra.

Chapter XI. The Mantra of this is called the Durgā-Mantra. The value of this Mantra as a means of destroying enemies is frequently referred to. *Abhicāra*, one of the technical words used in connection with the terrible aspects of sorcery, is found in verses 81 and 124.

Chapter XII. The deity of this chapter as well as the main Mantra is named Tripurā-Bhūiravī. This goddess is very highly praised. In one passage she is identified with Viṣṇu, Śiva, Brahman, and their wives (84-85).

Yantras are formed (25 ff.) and *śaktis* named (35-36).

Chapter XIII. The Mantras of Gaṇapati, i. e., Gaṇeṣa, are handled in this chapter. The position in which he sits with his wife is described in 73, 84, 91 (untranslatable). Stars are said to be made by water thrown from Gaṇeṣa's trunk, and he is said to play with the sun and moon as with balls (142 and 145). As to the rest, the "practices" of the chapter are as in other chapters.

Chapter XIV. The Mantras of the heavenly bodies are here given.

1. The Moon-Mantra with Soma as deity (1-28). 2. The Sun-Mantra with Āditya as deity (29-81). 3. The Ajapa-Mantra, i. e., H-a-n-s-a. This is also the sun (82). 4. Agni-Mantra with Anala as deity (95).

Chapter XV. The great Mantra of Viṣṇu is the subject of this chapter. In verses 13-20 the sun and Viṣṇu are correlated by their names. The Mantras of certain of Viṣṇu's incarnations are given: (1) Rāma Candra (85-109); (2) Varāha (110-139); (3) Pṛthivī (140-154).

Chapter XVI. The Mantras of this chapter are linked up with Nṛsiṃha. These Mantras are remarkably effective in destroying enemies (90).

Chapter XVII. Here we have the Mantras of Purnoṣṭama, i. e., Jagannāth, i. e., Viṣṇu-Avatar. The chief Mantra is made up of 200 letters. Eight shorter Mantras are named in 44-51 and a Kṛṣṇa-Mantra in 87. A long list of *çaktis* is given and a lot of Yantras are formed (124-155). Various acts of twelve Avatars of Viṣṇu are referred to (a) fish, (b) tortoise, (c) hoar, (d) man-lion, (e) Vāmana, i. e., Trivikrama, (f) Paraṣu Rāma, (g) Rāma Candra, (h) Baladeva, (i) Buddha, (j) Kalki, (k) Kṛṣṇa, i. e., Purāṇa Purnuṣa, and (l) Viṣṇu himself (156-169).

Chapter XVIII. The main Mantra is named Maheṣa with Īṣa as a deity. In 42-44 there is a Bhāirava-Mantra; in 45 a Durgā-Mantra; in 48-49 a Gaṇeṣa-Mantra, and in 52 a Īva-Mantra.

Chapter XIX. The Mantra here is named Mantrarātna and the deity is Ġambhū. In 57 the Cintāmaṇi-Mantra is given; in 114-121 the Kharagrāvan(sic)-Mantra of 170 letters. *Çaktis* are named in 124-125.

Chapter XX. The Aghorā-Mantra stands at the head of this chapter. Further, the large and small Mantras of Kṣetrapāla

are given in 35 and 47. Three kinds of meditation (*dhyāna*) are named, i. e., *sāttvika*, *rājasa* and *tāmasa* (55-56).

Chapter XXI. The Mantras of Gāyatri are the subject of this chapter. Gāyatri is said to be the manifestation of the Saccidānanda Brahman (1). Many names of Agni are given (51-52). A list of psychical and other essences and activities is found in 67-71. Nakṣatras and Rāgis are dealt with (78 ff. and 84 ff.). There is a good deal of foe-destruction provided for in the chapter.

Chapter XXII. The main Mantra of this chapter has two names (1) Udināstra(sic)-krtyāstra. The second word describes the reverse use of the Mantra, i. e., *pratiloma*. (2) Atidurga. The purpose of this Mantra is defined in the first verse as *gatra-vimardana*, i. e., enemy-destruction (1), and the whole chapter proves its power for this purpose. The Javana-Mantra begins at 59. The various *maṇḍalas*, i. e., mystical circles of the body, are referred to (8-13). Many Mantras are handled in the chapter. A goat, a snake and a cat figure in the ceremonial (56, 73, 77).

Chapter XXIII. The chief Mantra of this chapter is called Trāyambaka and refers to Mahādeva, i. e., the three-eyed one. Its purpose is just the opposite of the Atidurga-Mantra. Its purpose is expressed by the word "*mṛtyuinjaya*," i. e., death-conquering. The Mantra of Varuṇa is given at 52 ff. In 93-96 we have the Prānapratistha-Mantra, and in 117-122 a description of *mudrās*.

Chapter XXIV. This chapter explains the various kinds of Yantras hidden in the Tantras. From 94 on Kuṇḍali is praised. It is as though the author returned to the subject of the first chapter.

Chapter XXV. The closing chapter deals with Yoga. In verse 1, the author says that the wise (*viçāradāh*) call the unity of the Jīva and the Ātman, Yoga. Eight kinds of Yoga are named and described (5 ff.). The chapter contains many references to the body with its veins and parts. Kuṇḍali comes in for mention several times (34, 35, 62, 65-67). Nāda is said to be produced by closing all apertures of the body (46). The seven *vibhavas*, or secondary forms of Om, are given as *mahā-tattva*, *ahamkāra*, *śabda*, *sparga*, *rūpa*, *rasa*, and *gandha* (58).

Various deities are praised, viz.: Parbatī (60), Nārāyaṇa (61-2), Mahādeva (64), and Kuṇḍali (65 ff.).

Note on bṛhūcchandās, AV. iii. 12. 3. By DR. ARTHUR W. RYDER, Harvard University, Cambridge, Mass.

Thus ἀπαξ λεγόμενον has not been satisfactorily explained. Sāyaṇa's gloss reads as follows : *prabhūtācchādau māhaubhiḥ chandobhir vedāir upetā vā*. This cannot be accepted in its entirety, though it seems to me to contain a faint glimmering of the truth. The PW. renders 'mit hohem Dach versehen,' assuming that *-chandās* has here the same meaning as *chadis*, *chadman*. The occidental translators¹ follow this suggestion, though most of them express misgivings.

This rendering, though ingenious, is hardly to be accepted so long as no external evidence can be produced to show that *chandās* ever has the meaning 'roof.' Weber (*IS.* xvii. 236) has already pointed out that the root *chad* nowhere appears in unasalized form. All of Whitney's and Shankar Paudit's MSS. read *-chandāḥ*; and the assumption of a meaning elsewhere unknown is rendered unnecessary by the fact that the ordinary meaning of *chandās* gives a satisfactory sense. The literal meaning of *bṛhūcchandās* would seem to be 'whose meter is the *bṛhatī*.'

We have three parallels in AV. vi. 48. Indeed, the expression contained in the first words of our verse is strikingly similar to that of the three verses of that hymn. Compare

AV. iii. 12. 3. *dhuruṇy asi gāle bṛhūcchandāḥ* with

AV. vi. 48. 1. *gyeṇō 'si gāyatrācchandāḥ*

2. *ṛbhūr asi jāgacchandāḥ*

3. *vṛṣā 'si tristūpacchandāḥ*²

The verse iii. 12. 3, with the resolution *dhuruṇt asi*, counts 36 syllables; it is then mechanically a *bṛhatī*, and is so reckoned by the Anukramaṇī. The intrinsic fitness of the connection

¹ Ludwig, *Rigveda*, iii. 463; Zimmer, *AIL.*, p. 150; Weber, *IS.* xvii. 236; Grill, *Hundert Lieder*², p. 59; Griffith, *Hymns of the Atharva-Veda*, i. 97; Bloomfield, *SBE.* xlö. pp. 140, 345; Whitney, p. 105.

² These verses occur in other Vedic texts; see Bloomfield, *Festgruss an Roth*, p. 150; or Whitney, p. 316.

between the building house and the 'great' meter is apparent.¹ Especially significant, in connection with the second half of our verse, is the relation that exists between the *bṛhatī* and domestic cattle : TMB. vii. 4. 4, *paṣavo vāi bṛhatī* ; ÇB. xii. 7. 2,² *bārhatāḥ paṣavah* ;² cf. further ÇGS. iii. 3. 1, in the house-building ceremony : *rathantare prati tiṣṭha vāmadanga gṛagrasa bṛhatī stabhāge 'ti sthāpārājum abhinirṇati* ; and iii. 4. 7, in the sacrifice to Vāstospati : *bṛhato [stotriṇṇa] aparāhṇe [juhati]*.

¹ For the symbolism of the *bṛhatī*, see Weber, *IS.* viii. passim (for details, see Index).

² These and other references are given by Weber, l. c. p. 44.

*Kṛṣṇanātha's Commentary on the Bengal Recension of the
Çakuntalā. By DR. ARTHUR W. RYDER, Harvard Uni-
versity, Cambridge, Mass.*

AN excellent and little known commentary on the Bengal recension of Kālidāsa's *Abhijñānaśakuntalā* is the *Praveçikā* of Kṛṣṇanātha Nyāyapañcīnana (second edition. Calcutta. 1888. 323+14 pp.).¹ To this work my attention was called in the fall of 1900 by Professor Geldner of the University of Berlin. This commentary is recent; the colophon tells us that the work was finished on the ninth day in the bright half of Āçvina, *çaka* 1789 (autumn of 1867 A.D.), while the author was living at Pūrvasthali, a village on the Bhāgīrathī, near Navadvīpa (=Nadiya, at the confluence of the Jellinghy).

The work is prefaced by eight stanzas, the first of which contains an introductory prayer to Çiva, full of plays on words. In these introductory stanzas, the writer's elder brother Çivanāthaçarman receives a handsome tribute for his character and erudition. He was learned in the *dharmaçāstra*'s, in grammar, astronomy, and music, and employed his leisure time with *kāvya*s, *alanikāra*s, and dramas. This Çivanāthaçarman wrote a commentary on the *Ratnāvalī*. The father of Kṛṣṇanātha was Keçavacandra, of the family of Arjunamiçra, resident in Vidha.

Further information concerning Kṛṣṇanātha's life may be gathered from his work as follows. In commenting on the use of *mahābrāhmaṇa*, as applied by the king to the Vidūṣaka near the end of the second act (Pischel 45. 2), he shows himself familiar with the idiom of Benares by saying (76. 18): "In Benares and elsewhere the term *mahābrāhmaṇa* is applied to Brahmans who steal the best *çrāddha* (*agraçrāddhahāraka-vipreṣu*)." He is apparently the author of the commentary on the *Vāta-dūta*, mentioned at 117. 12. The expression at 47. 20 also seems to show that he wrote other works.

Apart from the very numerous citations of Amara, Kṛṣṇanātha gives about three hundred and sixty quotations from

¹ A MS. of this work is mentioned in Oppert, *Lists of Sanskrit Manuscripts in Private Libraries of Southern India*, Vol. II, No. 8382.

nearly thirty lexicographers. His most frequently quoted lexicographical authorities are the *Amarakoṣa*, the *Medinikoṣa* (114 quotations), the *Viṣvaprakāṣa* (91 quotations), the *Trikāṇḍageśa*, and the *Ṣaḍdābhi*. The less frequently cited authorities are *Hemacandra*, the *Vāijayanti*, the *Ṣaḍdaratnāvalī*, *Jaṭādhara*, *Dhananijaya*, the *Ṣaḍdārṇava*, *Bhāguri*, the *Hārāvallī*, the *Ratnakoṣa*, the *Rājapurāṇa*, *Rudra*, *Śaṅkara*, *Halāyudha*, *Dharaṇi*, the *Bhāriprayoga*, *Ajayapāla*, a *Dvirūpakoṣa*, *Rabhasapāla*, and *Vyādi*. He furthermore cites (30. 12) "certain commentators" on *Amara* and (140. 21) *Subhūti*.

In addition to numerous quotations from *Pāṇini* and the literature ancillary to his work, there are found 28 quotations from the *Kavikalpadruma* and two from the *Dhātudīpikā*.

To the following legal authorities reference is made : *Manu* (22 times), *Yājñavalkya*, *Dakṣa*, *Devala*, *Viṣṇu*, *Hārta*, *Nārada*, *Yama*, the *Agastyaśāhī*, *Kātyāyana*, *Gautama*, *Parāśara*, *Pāṭhali*, *Bṛhaspati*, the *Ratnamālā* and *Ṣaṅkha-līkhita* ; also *Kāmandaki*.

Kṛṣṇanātha's rhetorical authorities are the *Sāhityadarpaṇa*, the *Kāvyādarṣa*, the *Kāvyaprakāṣa*, the *Candrāloka*, the *Ujjvalamūlamanī* and *Bhojarāja*. *Bharata's* work on the drama is quoted eight times.

The *Saṁgītadāmodara* is quoted for a musical definition ; for metrical matters, *Piṅgala*, and *Halāyudha's* comment on *Piṅgala* are quoted.

Astronomy is represented by the *Siddhāntaśiromaṇi*, *Jyotiṣatattva*, and *Sūryasiddhānta*.

The medical authorities to which *Kṛṣṇanātha* makes reference are *Suśruta*, the *Bhāvaprakāṣa* and *Caraka*. *Vātsyāyana* is referred to for erotic material.

For augury and chiromancy the *Sāmudraka*, *Vasantarāja* and the *Adbhūtasāgara* are cited.

Finally, a quotation is given from the *Yajñapārśvaparīṣiṣṭa*. Of several quotations I have not discovered the source.

Various literary works are furthermore laid under contribution for illustrative material. Thus among the *Purāṇas* : the *Viṣṇupurāṇa*, the *Matsya*-, *Garuḍa*-, *Padma*-, *Kūrma*-, *Vāmana*-, *Narasiṁha*-, *Brahma*-, and *Vāyupurāṇas*. The *Mahābhārata* is quoted eight times (including a reference to the *Bhagavadgītā*), and the *Rāmāyaṇa* once. Other dramas are very sparingly

made use of ; reference is made once to the Urvagī and once to the Uttararāmacarita. Occasional citations are found further from the Kādambarī, the Raghuvāṅga, the Kirātārjunīya, the Vāsanavattā, and the Çiṅpālavadha.

Kṛṣṇanātha seldom cites other commentators on the Çakuntalā and never by name,—though he once (146. 24) makes reference to an opinion expressed by Mallinātha in his commentary on the Kirātārjunīya. In the seventh of his introductory stanzas, he informs us, however, that he sometimes differs from previous commentators.

A few of Kṛṣṇanātha's interpretations may be adduced by way of illustration.

In the fourth act (Pischel 79. 6-7) Priyamvadā says : "Hurry, Amsūyā, hurry ! The hermits who are going to Hastināpura are making their voices heard." Kṛṣṇanātha (136. 20) mentions the opinion of a somebody who declares this to be a false reading, because Hastināpura did not at that time exist. Our commentator ingeniously refutes this opinion as follows : Hastināpura, he says, was Duṣmanta's capital in that version of the Çakuntalā story which is found in the first book of the Mahābhārata, and this is proved by the following quotation (MBh. i. 74. 13=3000) : "'Good' said they, and all the mighty men, setting before them Çakuntalā with her son, set out for Gajasāhvaya," where they were to meet Duṣmanta. But, continues Kṛṣṇanātha, Gajasāhvaya is Hastināpura. This he endeavors to prove by means of two further quotations from the first book of the Mahābhārata and the statement of the Trikāṇḍageṣa : "Nāgāhva, Hastināpura, Gajāhva, and Hāstina are synonyms." Having thus established the positive side of his argument, namely, that we cannot go behind the authority which we may by a little combination deduce from the Mahābhārata, he returns to the objection, formulated in a quotation from the Viṣṇupurāṇa. This text declares (iv. 19. 10) that "it was Hastin who founded Hastināpura" and Hastin (iv. 19. 2 ff.) was the great-great-great-grandson of the adopted son of Duṣmanta's son Bharata. But this, says Kṛṣṇanātha, simply means that he beautified the city, as did Kuṅa upon Rāma's decease in the case of the city of Ayodhyā. To be sure the Mahābhārata says : "Of her (Suvarnā) was born to him (Suhotra) Hastin who established this Hāstinapura" (MBh. i. 95. 34=3787).

Yet in this case 'established' means no more than 'protected from destruction.' In the same way are to be understood the words of the Raghuvamśa, which declares that Śatrughna was the founder of Mathurā (Ragh. xv. 28), though this city is nevertheless described as the capital of King Suśeṣa, who made one of the gathering at the time of King Aja's wedding (Ragh. vi. 48).

Very ingenious is Kṛṣṇanātha's explanation of the uncommon word *apsarastīrtha*, which occurs three times in the play (stanza 148 = Pischel 112. 2 ; beginning of Act vi. = Pischel 118. 10 ; near the end of Act vii. = Pischel 167. 2). The word is ordinarily regarded as the name of a place (PW. s.v. ; Apte s.v.) ; but Kṛṣṇanātha defines as follows. First occurrence: " 'whose appearance (*tīrtha* = *darśana*) is like that of Apsarases' (*tīrtham . . . darśane*, Ṣaḍābhī), i. e. virtually 'appearing like an Apsaras.' Or the meaning is : 'whose place of origin (*yonī*) is the Apsarases,' i. e. 'Apsaras-born' (*tīrtham yonau*, Halāyudha)" (K. 207. 12-14). Second occurrence (K's text has *-saṁdīpita* for Pischel's *saṁdīpita*) : "the actions (K. supplies *karmajātam*) mentioned (*saṁdīpita* = *ukta*) by the Apsaras-born (*apsarastīrtha* = *apsarayani* : *tīrtham yonau*, Halāyudha)" (K. 217. 12-13). Third occurrence: "*apsarastīrthārataraṇāt* = *avatīrṇāpāpsarastīrthāt* (abstract with *kṛt*-suffix used concretely), i. e. 'from one Apsaras-born descended to earth' (*tīrtham yonau*, Halāyudha)" (K. 317. 11-13).

As an instance of Kṛṣṇanātha's skill in detecting *glexes* may be taken his comments on stanza 177 (K. 264. 10-16). In this verse he finds four words which contain an intentional ambiguity in that they refer both to the royal house (or the king) and to the Sarasvatī:

- <i>saṁtati</i>	1. family	2. stream
<i>pūravam</i>	1. pertaining to Pūru	2. exceedingly (<i>bhūyisham</i>)
<i>prajāvandhye</i>	1. without offspring	2. deserted
<i>anārye</i>	1. ignoble	2. untraversable (<i>agamya</i>)

Further examples are to be found at 25. 7-17 (explaining the speech of Śakuntalā, Pischel 13. 1-4) and at 35. 24-36. 12 (explaining the speech of the king, Pischel 19. 12-13).

A matter apt to escape the notice of the occidental reader may be added. In commenting on stanza 202, Kṛṣṇanātha calls

attention (293. 9) to the color of the lotus, which is here compared with Sarvadamana's hand. He then adds (293. 11) a quotation from the Sāmudraka: "Pink palms are a sign of royalty (*yasya pāṇitalāu raktāu tasya rājyam vinirdiṣet*)."

Quotations might be multiplied. Yet these citations will perhaps suffice to show the erudition and judgment of Kṛṣṇanātha. His commentary is a contribution to the better understanding of the play.

¹ This point is often made in the Mahābhārata. Compare i. 122. 29, where, when the king makes the *aṅguli*, his pink fingers (*raktāṅguli*), look like a lotus-cup.—ED.

Jupiter Dolichenus.—By REV. CHARLES S. SANDERS, Aintab, Turkey.

For a thorough understanding of Jupiter Dolichenus and his worship, two things would be necessary. The first of these is a satisfactory knowledge of the old Baal cults or worship of Syria, for without doubt the cult of Jupiter Dolichenus in its original form was simply the worship of the local Baal. How much is really known concerning the old Baal worship in North Syria is a matter that admits of question. One valuable source of information is the coins of the region, of which more later.

Again, on the Roman side, the cults of the purely Roman worship of Jupiter—Jupiter Stator, Jupiter Depulsor, etc.—would need to be better understood. The relation of these to the national worship has not yet been adequately investigated; see, for example, the article "Jupiter" in the *Encyclopædia Britannica* (vol. xiii., p. 780). If this relation could be made clear to us, we should very likely see how easy it was for the Romans to adopt the Dolichenus cult, its worshippers among the Romans conceiving of it as merely a new manifestation of their national worship.

Dolichenus seems to have come into the Roman world as one of the Oriental gods, so popular in Rome in the second century. The Antonines being very friendly toward the Oriental cults (witness Antoninus Pius even building a temple to Jupiter Heliopolitanus), they came in with a rush. Mithra, the most popular of all, has little bearing on our subject, though Dolichenus is elucidated passim in Dr. Cumont's great work on Mithra.¹ The Egyptian cults have also no interest for us in this connection. Two cults, however, seem to have much in common with the worship of Jupiter Dolichenus, namely, that of Atargatis (Derketo), the "Dea Syria" of Hierapolis, well known through Lucian's *De Dea Syria*, and that of Jupiter Heliopolitanus. There are other cults, as *Jupiter Damascenus*, *Jupiter Olbins*,

¹ *Textes et Monuments figurés relatifs aux Mystères de Mithra*, Brussels, 1899.

etc., but scarcely anything is known of them. On the ground of contiguity, we should expect the inscriptions of the god Aziz of Edessa, found in Dacia, to throw some light on the subject; but that which is gained from them points more probably to affinities with the Mithra cult. See Cumont's *Textes et Monuments*, i. 250, note 2; 260, note 2.

Three inscriptions of Dacia and the unequivocal testimony of Stephanns of Byzantium locate the original seat of Dolichenus' worship at Doliche (Δολίχη) in Commagene. While there are many places bearing this name, the above reference ("veterans Commagenorum dens") settles the question. Stephanns, in speaking of Doliche in Commagene, mentions the worship there of Jupiter Dolichenus. The place is rather near the southern boundary of Commagene. Its coins begin only with Marcus and Verus. Ptolemaeus is the first geographer to mention it. Yet the Macedonian name makes us at least wonder whether it was not one of the places where Alexander the Great's veterans settled. It is very near the junction of four Roman roads; one leading to Samosata, one to Edessa via Zengina, one to Germanicia (the modern Marash), and one to Cyrrhus and Antioch. It is not far (some thirty-six miles) from Cyrrhus, a center of Roman soldiers, a fact which probably accounts for the transformation of the local Astarte into "Minerva Cyrrhestica." This proximity of a great Roman fort may also account for the distinctively military character of Jupiter Dolichenus in his European transformation.

In church history Doliche is noteworthy as being the place where Eusebius of Samosata was murdered just after the termination of the Arian controversy. At present it is merely a prosperous Turkish village. A mound near by yields pillars, capitals, etc., to every digger, and probably this hill was the site of Dolichenus' original temple. The place is notable for the large number of sepulchres found there. The only (?) inscription, however, thus far discovered among them is a hit of Syriae. The present village is notable for an unusually handsome mosque, erected probably before the Turkish period. There is a much higher hill about two miles away, which is known as Dulak Bâbâ. It contains a Moslem ziyâret, and probably marks an ancient holy place. It is possible that the original seat of the Dolichenus worship was here, but more probably it was the hill mentioned above, very near the present Doliche.

According to Hettaer (*De Jove Dolicheno*, Bonn, 1877), we have a bit of local idiom in the very name "Dolichenus." Stephanius says that the god was called "Zeus Dolichaïos," but that "the local usage is Dolichenus." *Dolichaïos* is not once used in the inscriptions, the form being *Dolichenus* or a misspelling of the same, or else what seems to be an echo of one of the Syriac forms of the name, which is variously written *Doluk*, *Dulik*, etc.

When we come to the conventional representations of the god, two distinct questions arise: (1) How was he represented at home? (2) What was his appearance in his European transformation?

(1) The "Dea Syria" is abundantly pictured on coins; Jupiter Heliopolitanus appears on coins and also on bits of statuary, though the latter are generally broken, as in the case of the specimens in the museum of the Syrian Protestant College in Beyrout. Coins of Dolichenus are rare. The writer has been allowed to see some in the possession of Mr. E. Michel of Alexandretta. We seem to have here the original Syrian form. The god is standing on an animal which is rather small in proportion, and both are facing the right. The military accoutrements so prominent in the European transformation are wanting. On one coin the god—still standing on an animal—is represented as under a canopy or roof on pillars. The question at once arises, whether the tetrastyle of *CIL.*, vi. 414, is not identical with such canopies as these, which are often met with on coins of North Syria, certain coins of Zeugma, for example, and others probably belonging to deities whose names have passed into oblivion.

Little bronzes with a human being standing on an animal more or less fantastic are quite common. Probably they are also representations of Syrian gods. They are very common around Zeitûn and Geok-sun, in Western Commagene. This branch of the subject is as yet practically uninvestigated.

(2) In his European transformation there seem to be only two features of Dolichenus, on the monuments where he is pictured, which are Oriental; namely, the uplifted position of the arms, and the fact that the god stands on an ox which faces the right. He has the pileus on his head, the lorica on his body, is often provided with greaves, and wears the soccus. Sometimes

there is the military cloak. In the right hand is the bipennis and a thunder-bolt in the left. Often a winged victory is about to crown him, and an eagle is sometimes near. In a very few cases the Sun and Moon figure, as in the representation of Mithra. Sometimes the god is represented unmounted, and certainly once just like the Roman Jupiter. This taking on of pure Roman forms happens also sometimes in the Egyptian cults.

It is a striking feature of the old Syrian gods that they have their partners, though the partners are subordinated. Thus, the Dea Syria has her male complement (see Hettner), and similarly Jupiter Dolichenus has his female associate. She is on an ibex, a wild goat or some such animal, which faces the left, and thus Dolichenus and his complement face each other on monuments where they both exist. Her name in the inscriptions is Juno; but as Jupiter Dolichenus is the local Baal of Southern Commagene, so, probably, in the original worship, his complement Juno bore one of the several names under which Astarte appears.

To one interested in Commagene, there arises at once the question why this distinctively Commagenean god had his original seat in so obscure a place. The discoveries of Humann and Puchstein,¹ which show so strong a development of the Mithra cult in Nimrud-Dāgh, suggest one answer. As the inscription there shows that the reigning dynasty at Samosata were followers of Mithra,² we should hardly expect, very near by, a god who could be called "aeternus Commagenorum deus." Again, while some of the old sites have kept their identity through the centuries, one has only to travel through Commagene, Cyrrhæstica, and Osrhoene, now, to find many old temple sites marked as once important centers of worship by the number and size of the weather-beaten pillars which are still standing, though no record of their glory remains. Doliche may in the pre-Roman time have had an importance in the religious world of Southern Commagene of which we now know very little.

Hettner does not enter at all into the manner in which Dolichenus was worshipped. Of this very little is known. That there used to be *dolichena*, just as there were *mithrea* in the cult of Mithra, is fully ascertained, such having been actually

¹ *Reisen in Kleinasien und Nord-Syrien*, Berlin, 1890.

² See Cumont, *Textes et Monuments*, ii. 187 f.

found.¹ The coins would seem to show that the tetrastyle was a feature of the worship of the old Syrian gods. Such a tetrastyle with Jupiter Dolichenus under the open roof is figured on one of the coins mentioned above. Would it be too bold a conjecture to assert that such a tetrastyle did not represent the original seat of worship, but that it was a feature of the country then, as the ziyâret is now, and that very likely many modern ziyârets represent such ancient high places?

Sacerdos is used so often as to show plainly that the priestly idea and function were very fully developed. *Candidatus* is a word occurring in a way that makes us wonder whether it does not mark a special class, being employed, that is, in something like its primary meaning (white-clothed), and not in the usual, secondary sense of the word. See especially the Roman inscription (*CIL.* vi. 406 (also p. 831, note to 406), *pro salute sacerdotum et kandidatorum et colitorum*. In the same inscription, *lecticari dei. Triclinium*, *CIL.* iii. 4789(b), and *cenatorium*, quoted by Cumont,² rather go to show something like a sacrament, or at least a sacrificial meal. There was such in the cult of Mithra; and in the upper part of Commagene, among some of the Kuzul-hash Koords, there is probably something of the same thing to-day. Though kept secret as much as possible, it is known that such rites exist.

Aside from the hints contained in these and like words, we have no knowledge of the details of the worship, beyond what may be inferred from the little we know about the cults of Mithra and Atargatis. Vows were evidently quite a feature of the worship—hence many of the inscriptions. *Ex jussu ipsius*, *ex jussu numinis* would go to show a degree of personal relation, or at least the possibility of receiving impressions from the god regarding his will.

As no inscriptions have been found in the East (so far as I am aware) relating to Dolichenus, we are obliged to speak of this god hereafter with exclusive reference to his Western transformation. These Eastern cults do not seem to have taken root at all in Greece; it is the Roman world which follows them. Hettner gives the following as the distribution of the three cults, in the Western world:

¹ See Cumont, *Textes et Monuments*, i. 333.

² *Textes et Monuments*, i. 320, note 8.

	Dacia.	Moesia.	Pannonia.	Noricum.	Raetia.	Germania.	Gallia.	Britannia.	Africa.	Dalmatia.	Italy (not Rome).	Rome.	Total.
Dea Syria.....	2(?)	1						3			1	3(?)	10
J. Heliopolitanus....	2	1(?)	4(?)			1	1	2(?)	2		4	4	21
J. Dolichenus	11	13	3	1	14	1	8	2	1	9	20		84
Total by countries...	15	1	18	3	1	15	2	13	5	1	14	27	115

It must be borne in mind that the above list includes not only inscriptions but *tituli* as well; often, for example, only a statue or part of a bas-relief, which, however, has features which make it without doubt the *titulus* of such and such a god.

In two Dacian inscriptions Heliopolitanus and Dolichenus are joined together. This is good evidence of the close resemblance which was recognized as existing between the two cults. As in North Syria the two deities were different local manifestations of the same god, essentially, so in Europe their votaries looked upon them as holding much the same relation. Leave the sex out of account, and the same would probably be true of Dea Syria also.

It remains to answer briefly three questions pertaining to the Dolichenus cult in Europe: (1) How did it get there? (2) Where did it take root, and to what degree? (3) The dates *in quo* and *ad quem*.

(1) *How did it get to Europe?* The first answer that comes to mind is, that of course the legions in the East brought it back with them (compare Tacitus, the legion from the East "saluting the rising sun"), they had become votaries of Mithra. But this is probably a wrong inference. We must especially bear in mind that, so far as we can tell from comparison of the representations on coins and on bas-reliefs found in Europe, it was not a purely Oriental cult, but a *transformed* Oriental cult, that was so popular in the Roman empire.

One fact which especially attracts our attention is the frequent recurrence of the name *Marinus*, and the way in which it is connected with *sacerdos*, in the inscriptions. It seems proba-

ble that "Marinus" was a name specially connected with the cult; perhaps it was the name of a priestly family, or rank.¹

In the early centuries there seems to have been a very large number of traders from the East throughout the Roman empire. The inscriptions prove their existence as far as Lyons, at least, and probably they travelled over the known world as diligently as do to-day the Armenians, and still more, the Syrians of the Beyrout region. We must also remember the vast number of slaves from the East, so plentiful especially in Rome. As Christianity often worked up from slaves to their masters, why may not the worship of Dolichenus have done the same?

Outside of Italy, these cults seem to have taken firmest root in Dacia. When this province was drained of men after Trajan's subjugation of the country, Eutropius tells us that the emperor ordered that large drafts be made on all parts of the empire to re-peoplo the country. The inscriptions of Aziz of Edessa in Dacia show us that a large draft was taken from Osrhoene, just across the Euphrates from Commagene. Why should not the presence of the Dolichenus cult in Dacia lead us to believe that such a transplanting took place, at that time, from Commagene also? That even associations and guilds of Syrians existed there, and in numbers too, is shown by the inscriptions.

Juvenal's "Jam pridem Syrus in Tiberim defluxit Orontes" shows us what an influence the oriental part of the Roman population had at that time, if not on the government, at least on the life of the people. What with merchants, soothsayers, dancing-girls, soldiers, and slaves, the different lines of influence from the East were continually tightening their grasp on the West.

The objection may be made that, if the influences of these cults had been so powerful, later Roman literature would reflect them more. The Mithra cult may be quoted in answer. The enormous number of its monuments shows how it flourished,—even some of the emperors patronized it,—and yet what can we learn of it from Latin authors? It is very evident, at all events, that the priests of Dolichenus were everywhere zealous in propagating their religion, and that their efforts were successful. Hettner thinks that the influence of the soldiery in spread-

¹ See, however, Ed. Meyer, in Roscher's *Lexicon der Mythologie*, s. v. "Dolichenus," who suggests that this is a Latinized form of the Syriac *marna* "(our) lord."

ing the cult has been overestimated. We know, however, that the XVI. legion "Flavia firma" served in Commagene. Officers were changed from legion to legion, and thus may have influenced other legions when serving later in Europe. There were, moreover, at least six cohorts from Commagene, and that these cohorts were very busy in propagating their ancestral worship is extremely probable.

(2) *Where did the worship take root, and to what degree?* So far as extant inscriptions give us an answer, the cult of Dolichenus seems to have taken root quite deeply in Dacia, Pannonia, Germania, Britannia, Italy and Rome. In Dacia, two or three cohorts from Commagene served a long time. In Pannonia, priests and merchants seem to have been very active, and we find one inscription, "Syrns ex regione Dolica." As to England, we know (i. e., can certainly infer) that Dea Syria, Heliopolitains and Dolichenus were all taken there by Cohort I. of the "Iammii." This name has with great probability been referred to the Syrian city Hamā (Hamath). If this explanation is correct, the fact shows how true it is that these worshippers regarded a number of distinct Syrian cults as essentially the same; for Hamā is far beyond the territory of Dolichenus, and there is no evidence tending to show that the Dolichenus worship had in its own land anything like the wide-reaching influence of Dea Syria, as attested by Lucian of Samosata.

As to the degree to which these cults affected the territories involved, we can only guess. The influence must, however, have been very considerable in Dacia and Pannonia, and in England in the small territory north of Hadrian's wall, where all the English inscriptions but one are found.

(3) *The date.* The earliest inscription known, which is dated, is one in England; namely the inscription *CIL. vii. 506*, belonging to the time of Antoninus Pius, 139-161 A. D. The temple of Dolichenus on the Aventine was probably built (aedicatus) or recognized as a temple in the time of the Antonines. That such a temple was founded (conditus) before the time of Claudius is very probable. Hettner, using arguments put forth by Jordan¹ in treating of the temple of the Dea Syria at Rome, concludes that the worship of Dolichenus must have become

¹ In *Hermes*, 1872, p. 320.

naturalized, so as no longer to appear foreign to the Romans, at the time when Claudius brought the Aventine within the limits of the *pomerium*, as foreign gods were forbidden within the *pomerium*.

We cannot suppose that the cult of Dolichenus went from Commagene to England at a bound. It is found there, however, in the time of Antoninus Pius. In this connection *CIL*. vii. 316 is interesting, "[*templum*] *vetustate co(n)lapsum*." The inscription is not earlier than the close of the second century, but how much older was the temple? It seems impossible to account for the facts known except on the supposition that in the first century, and possibly even earlier, the cult first began to work westward; compare the earlier appearance of Dea Syria in Italy. Later the cult seems to have become merged in that of Mithra. *CIL*. vi. 412 and 413 show the beginning of this process, in the dedication to the Sun and Dolichenus together. Yet the very late date of some of the inscriptions makes it probable that it continued to maintain its separate existence in some localities, at least, until the time when Christianity relegated so many of these cults to oblivion.

Bibliography of Kālidāsa's Mālavikāgnimitra and Vikramorvaṣi.—By MONTGOMERY SCHUYLER, JR., United States Embassy, St. Petersburg, Russia.

IN the last volume of the Journal of the American Oriental Society (xxii, 1901, pp. 237-248) I published a bibliography of "The Editions and Translations of Çakuntalā." The present paper is designed to complete the bibliography of the dramatic works of Kālidāsa by collecting a list of the editions and translations of the other two plays of the Hindu Shakespeare. Of these, the *Vikramorvaṣi* is universally acknowledged to be the composition of Kālidāsa; but about the authorship of the *Mālavikāgnimitra* there has been considerable discussion. The chief grounds upon which are based the arguments against the authorship of Kālidāsa are the great inferiority of this drama in poetic merit, and its clumsiness in construction, when compared with the *Çakuntalā* and the *Vikramorvaṣi*. It is not possible or desirable to go into the discussion here, but it will be sufficient to say that the consensus of opinion at the present time is in favor of admitting the *Mālavikāgnimitra* as the composition of Kālidāsa, and accordingly it will be included in the present study.¹

MĀLAVIKĀGNIMITRA.

TRANSLATIONS.

A. English.

1. *Mālavikāgnimitra*, translated into English prose by C. H. Tawney.

First edition. Calcutta, 1875, 8vo, pp. x+83.

Second edition. Calcutta, 1891, 12mo, pp. 121.

¹ Here, as in the "*Editions and Translations of Çakuntalā*," the translations are arranged according to the language in which they are written, and under each heading chronological sequence is followed. In transcribing titles I have usually retained the spelling of the original. Works of general criticism of Kālidāsa which deal only incidentally with the plays are not noted here. Nor have manuscripts been included, although I hope to catalogue them in my forthcoming *Bibliography of the Sanskrit Drama* (Columbia University Press).

2. *Mālavikāgnimitra*, a Sanskrit drama, translated into English prose by G. R. Nandargikar.

Poona, 1879, 8vo, pp. 53.

[See also under Text Editions, Nos. 12, 13, 14.]

B. French.

1. *Malavika et Agnimitra*. Traduit pour la première fois en français par P. E. Foucaux.

Paris, 1877, 16mo, pp. xi+118 (Bibl. Orient. Elzévirienne, no. xiv).

2. *Mālavikāgnimitra*. *Agnimitra et Mālavikā*, comédie en cinq actes et un prologue, mêlée de prose et de vers, traduite de sanscrit et du prākrit par Victor Henry.

Paris, 1889, 8vo, pp. xii+110.

(Extr. des Mém. de la Soc. des Sciences de Lille.)

C. German.

1. *Mālavikā und Agnimitra*, ein Drama des Kālidāsa in fünf Akten, zum ersten Male übersetzt von Albrecht Weber.

Berlin, 1856, 16mo, pp. xlviii+107.

2. *Malavika und Agnimitra*, ein indisches Schauspiel, metrisch übersetzt von Ludwig Fritze.

Leipzig, 1881, 32mo, pp. 74.

D. Dutch.

- Danseres en Koning. Malavika en Agnimitra. Tooneelstuk mit het Sanskret vertaald door J. van der Vliet.*

Haarlem, 1882, 8vo, pp. 132.

E. Swedish.

- Mālavikā. Ett indiskt skådespel. Från Sanskrit öfversatt af H. Edgren.*

Malmö, 1877, 8vo.

F. Danish.

- Kongen og Danserinden. Lystspil i fem Akter. Oversat af E. Brandes. Med Tegninger.*

Kjöbenhavn, 1874, 8vo.

G. Italian.

1. *Malavica ed Agnimitro.* Dramma in cinque Atti. Tradotto da Antonio Marazzi.
Milano, 1871 (in his *Teatro Scelto Indiano*, vol. I.).
2. *Mālavikāgnimitra.* Dramma indiano tradotto in italiano da Francesco Cimmino.
Napoli, 1897, 12mo, pp. xi+126.

H. Bohemian.

- Mālavikā a Agnimitra.* Přeložil Zubatý.
Prag, 1893, 8vo, pp. 102 (*Sborník světové poesie* 16).

I. Bengali.

- Mālavikāgnimitra*, translated into Bengali by Sourindro Mohun Tagore.
Calcutta, 1877, 18mo.

J. Marathi.

1. *Raja Agnimitra*, a Marathi translation of the *Mālavikāgnimitra* by Vaman Shastri Islampurkar.
Bombay, 1889, 8vo, pp. 204.
2. *Mālavikāgnimitra.* Translated into Marathi by Rāo Sāheb Nārāyan Gopāl Rāje.
Bombay, 1895, 8vo, pp. 156.
3. *Sangīta Mālavikāgnimitra Nātak*, or the drama of *Mālavika* and *Agnimitra* in musical verse. Translated into Marathi by Bālkrṣṇa Gangādhara Varde.
Bombay, 1895, 8vo, pp. 136.

K. Hindi.

- Mālavikāgnimitra.* Translated from Sanskrit into Hindi by Sita Rama.
Cawnpore, 1899, 8vo, pp. 70.

L. Gujarati.

- Mālavikāgnimitra.* Translated into Gujarati by R. Udaryarama.
Bombay, 1870, 8vo, pp. 109.

TEXT EDITIONS.

1. *Mālavikāgnimitra*, Textum primum edidit et varietatem scripturae adiecit O. F. Tullberg. Vol. i [no more published].
Bonn, 1840, 8vo, pp. ix+108.
2. *Mālavikāgnimitra*.
Bombay, 1868, 8vo, pp. 4+89, lithographed.
3. *Mālavikāgnimitra*. A Sanskrit Play. With the commentary of Kāṭyāvema. Edited with notes by Shankar Pāṇḍurang Pandit. (In Bombay Sanskrit Series, No. vi.)
First edition. Bombay, 1869, 8vo, pp. xxxix+164.
Second edition. Bombay, 1889, 8vo, pp. xxxv+230.
4. *Mālavikāgnimitra: a Drama*. Edited with Notes by Pandit Taranatha Tarkavaehaspati.
First edition. Calcutta, 1870, 8vo, pp. 165.
Second edition. Calcutta, 1887, 8vo, pp. 148.
5. *Mālavikāgnimitra*, das ist *Malavika* und *Agnimitra*, ein Drama Kālidāsa's in fünf Akten. Mit kritischen und erklärenden Anmerkungen herausgegeben von F. Bollensen.
Leipzig, 1879, 8vo.
6. *Mālavikāgnimitra* with the commentary named Kumāragirirājya of Kāṭyāvema.
Vizagapatam, 1884, 8vo, pp. 133.
7. *Mālavikāgnimitra*, edited with an original commentary by Mrityuñjaya Niṣṣanka.
Madras, 1885, 8vo, pp. 262.
8. *Mālavikāgnimitra*.
Little Kanjiveram, 1886, 8vo, pp. 64. (In Grantha characters.)
9. *Mālavikāgnimitra*. Sanskrit text with full notes in English by M. C. Sadagopachariar.
Bombay, 1889, 8vo.
10. *Mālavikāgnimitra*, edited with the commentary of Kāṭyāvema, and with explanatory English notes by K. P. Parab.
Bombay, 1890, 8vo, pp. 153.
11. *Mālavikāgnimitra*. Edited with the commentary of Kāṭyāvema.
Bombay, 1891, 12mo, pp. 112.

12. *Mālavikāgnimitra*. With the commentary of Kāṭayavema.
Edited with explanatory English notes.
Bombay, 1891, 8vo, pp. 158.
13. *Mālavikāgnimitra*, with the commentary of Kāṭayavema
and several others embodied therein, edited with critical
notes and translation by S'. S'eshādri Ayyar.
Poona, 1896, 8vo, pp. 303.
14. *Mālavikāgnimitra*, edited with a close English translation
by Sadāshiv Bhimrāv Bhāgvat.
Poona, 1897, 8vo, pp. 126.
15. *Mālavikāgnimitra*. Edited with a commentary, notes and
translation by M. C. S'atakopācāri.
Kumbakonam, 1900, pp. 152.

CRITICAL WORKS.

1. Annotations on Sanskrit Classics. The *Mālavikāgnimitra*.
(In 'The Sanskrit Reader [Sanskṛitapāṭbavalī]. A
monthly magazine of Sanskrit literature, Bombay,
1884, 12mo, vol. ii, pt. 4, pp. 48.
2. Bollenzen, Friedrich. Beiträge zur Erklärung der *Mālavikā*.
In ZDMG. xiii, pp. 480-490.
3. Cappeller, C. C. Observationes ad Kalidasae *Malavikag-*
nimitram.
4. Haag, Friedrich. Zur Texteskritik und Erklärung von Kāli-
dāsa's *Mālavikāgnimitra*. Erster Teil. Auszug aus dem
Programn der Kantonssehule pro 1871-72.
Frauenfeld, 1872, 4to.
5. Vliet, J. van der. *Mālavikā-Maṇjulikā*.
(In Bijdrage, VI. v(=xlix), p. 169 seq.) On resem-
blances between the *Mālavikā* and the *Kathāsarit-*
sāgara.
6. Weber, Albrecht. Zur Erklärung der *Mālavikā*.
(In ZDMG. xiv, p. 261.)
7. Analysis of *Mālavikāgnimitra* in H. H. Wilson's *Hindu*
Theater, vol. ii, Appendix.

VIKRAMORVAÇI.

TRANSLATIONS.

A. English.

1. Vikrama and Urvasi, a drama translated from the original Sanskrit, by H. H. Wilson.
(In his *Hindu Theater*, vol. i.)
2. Vikramorvasi. Translated into English prose by E. B. Cowell.
Hertford, 1851, 8vo.
3. Vikramorvaçî. Translated into English lyrical verse by Brajendranath De. Canto I.
(In *Calcutta Review*, Oct. 1884, pp. 440-442.)
[See also below under Text Editions Nos. 16, 18, 19.]

B. French.

1. Vikramorvaçî Ourvasi donnée pour prix de l'héroïsme.
Drame traduit du Sanscrit par P. E. Fonceaux.
Paris, 1861, 8vo, pp. 96.
Paris, 1879, 16mo, pp. 137. (Bibl. Orientale Elzévirienne, no. xxvi.)

C. German.

1. Urvasi, der Preis der Tapferkeit. Ein indisches Schauspiel.
Aus dem Sanskrit und Prakrit übersetzt von K. G. A. Hoefer.
Berlin, 1837, 8vo, pp. viii+100.
2. Urvasi und der Held. Indisches Melodrama von Kalidasa, dem Dichter der Sakuntala. Aus dem Sanskrit und Prakrit metrisch übersetzt von B. Hirzel.
Frauenfeld, 1838, 16mo, pp. xxx+164.
3. Vikramorvaçî, das ist Urvasi, der Preis der Tapferkeit, ein Drama Kalidasa's, in fünf Akten. Herausgegeben, übersetzt und erläutert von F. Bollensen.
St. Petersburg (Leipzig), 1846, 8vo, 2 pts., pp. xvii+608+88.
4. Urvasi. Deutsch metrisch bearbeitet von E. Lobedan.
Leipzig, 1861, 16mo, pp. xiv+115.
5. Urvasi, ein indisches Schauspiel von Kalidasa, metrisch übersetzt von Ludwig Fritze.
Leipzig [1880], 32mo, pp. 80.

D. Swedish.

1. Vikramorvaṇi. Öfversat och förklart af C. J. Bergstedt.
Stockholm, 1846, 8vo.
2. Vikramorvaṇi. Öfversat af A. J. Callin.
Helsingborg, 1866, 8vo.

E. Italian.

Vikramorvasi, dramma tradotto di Francesco Cimmino.
Torino, 1890, 8vo, pp. 79.

F. Spanish.

Vikramorvasi, drama del poeta indio Kalidasa . . . Version
directa del Sanskrit por Garcia Ayuso.
Madrid, 1874, 8vo, pp. 136. (In Biblioteca San-
skrita, edited by the translator.)

G. Bohemian.

Urvasi. Drama v pěti jednáních od Kalidāsy. Emanuel Fait.
Prag, 1890, 4°, pp. 10. (Programm čech. Real-
gymnase.)

H. Bengali.

Vikramorvaṇi translated into Bengali by Kaliprasana Singh.
Calcutta, 1857, 8vo.

I. Gujarati.

1. Vikramorvaṇi. Translated into Gujarati by R. Udayarama.
Bombay, 1868, 8vo.
2. Vikramorvasi. A Sanskrit drama in 5 acts translated into
Gujarati prose and verse with critical, explanatory and
mythological notes, and a complete life of the poet by
Kilabhāi Ghanashyāmi Bhatt.
Bombay, 1898, 8vo, pp. 258.

TEXT EDITIONS.

1. Vikramorvasi: a drama. With a commentary explanatory
of the Praerit passages.
Calcutta, 1830, 8vo, pp. 122.
2. Urvasia Fabula Calidasi. Textum sanscritum edidit, inter-
pretationem latinam et notas illustrantes adiecit Robertus
Lenz.
Berolini, 1833, 4to, pp. xxv+238. (Same text as
No. 1.)

3. Vikramorvaṇī. A Drama by Kalidasa. Edited by Monier Williams.
Hertford, 1849, 8vo. (Prākṛit passages in Sanskrit only.)
4. Vikramorvaṇī . . . prākṛtahaṣṭyaṅ chāyayā sahitaṁ.
Bombay, 1859, 8vo, pp. 119. (Lithographed.)
5. Vikramorvaṇī. Edited by Rāmayasārma Tarkaratna.
Calcutta, 1868, 8vo.
6. Vikramorvaṇī nāma troṭakam. Edited with notes by Rāma-
maya Śarmaṇ.
Calcutta, 1869, 8vo, pp. ii+155.
7. Vikramorvaṇī troṭakam.
Calcutta, 1870, 12mo, pp. 67. (Prākṛit passages in
Sanskrit only.)
8. Vikramorvaṇī, a drama in five acts, by Kalidasa. Edited
with the commentary of Tārānātha Śarmaṇ by Pāṇḍit
Jibānanda Vidyasagara.
Calcutta, 1873, 8vo, pp. 184.
9. Kālidāsa's Vikramorvaṇīyam, heransgegeben nach drāvid-
ischen Handschriften von R. Pischel.
Berlin, 1875, 8vo (Auszug aus dem Monatsb. der
Königl. Akad. der Wissens. zu Berlin. Nachtrag
zum Oktober-heft, pp. 609-670).
10. Vikramorvaṇīyam. . . Edited with English notes by Shankar
P. Pāṇḍit. (In Bombay Sanskrit Series, no. xvi.)
First edition. Bombay, 1879, 8vo, pp. xii+162.
Second edition. Bombay, 8vo, pp. 310.
11. Vikramorvaṇī nāṭaka.
Little Conjeevaram, 1883, 8vo, pp. 60. (In Grantha
characters.)
12. Vikramorvaṇī, with interpretation of the Prakrit passages.
Vizagapatam, 1883, 16mo, pp. 118.
13. Vikramorvaṇī with a commentary. Edited by Āri Para-
vastu Ārinivāsa Bhaṭṭa Nāḍha Carya.
Vizagapatam, 1883, 8vo, pp. 180.
14. Vikramorvaṇī nāṭakam with commentary.
Madras, 1884, 8vo, pp. 24.
15. Vikramorvaṇīya with the commentary (Prākāṣikā) of Raṅ-
ganātha. Edited by K. P. Parab and M. R. Telang.
Bombay, 1888, 8vo, pp. 148.

16. Vikramorvaṣyam. The Student's Practical Edition with Sanskrit Text, English Translation and Notes by G. B. Vaidya.
Bombay, 1894, 2 Pts., 8vo, pp. xii+96+216.
17. Drama of Vikramorvaṣi. Edited with an elucidary commentary in Sanskrit by Moresliṅkar Rāmechandra Kāle.
Bombay, 1895, 8vo, pp. 173.
18. Vikramorvaṣya with the commentary Arthaprakāśikā. Edited with an English translation, critical and explanatory notes, and various readings by M. R. Kāle.
Bombay, 1898, 8vo, pp. 374.
19. Vikramorvaṣyam. With Sanskrit Text, English Translations, Copious Notes and an elaborate introduction, by Keshar Balkrishna Paranjpe.
Bombay, 1898, 12mo, pp. 264.
[See also above under Translations, C. 3.]

CRITICAL WORKS.

1. Apparatus criticus ad Urvasiam fabulam Calidasi, quem tanquam suae ejus libri editionis appendicem Londinii conscripsit Robertus Lenz.
Berolini, 1834, 4to, pp. 36.
2. Jackson, A. V. Williams. Time analysis of Sanskrit Plays.
I. The Dramas of Kālidāsa.
(In JAOS. xx, pp. 341-359.)

COLLECTED WORKS.

1. Oeuvres complètes de Kālidāsa traduites du sanscrit en français pour la première fois par Hippolyte Fanche.
Paris (Meaux), 1859-60, 2 vols., 8vo.
2. Teatro Scelto Indiano tradotto dal Sanscrito da Antonio Marazzi. Vol. Primo. Teatro di Calidasa.
Milano, 1871, 12mo, pp. 429.
3. Mahākavi Kālidāser Granthāvali. Edited by Nava Kumār Basu.
Calcutta, 1892.
4. Mahākavi Kālidāser Granthāvali. Edited by Upendra Nāth Mukherji.
Second edition. Calcutta, 1896, 8vo, pp. 1356.

A Manuscript of Gul ū Naurūz, a Seventeenth Century Persian Romance, in the Library of Columbia University.—By DR. ABRAHAM YOHANNAN, Columbia University, New York City.

AMONG the manuscripts in the library of Columbia University there is a small octavo volume of a seventeenth century Persian romantic poem, to which it is appropriate to call further attention. It is a manuscript presented to the library by Mr. S. P. Avery. The book is entitled *Gul ū Naurūz* (گل و نوروز), or Rose and New Year's Day; and it contains an attractive specimen of the romantic epopée of Persia, which may be of some interest to students of mediæval literature as well as to Orientalists, because of the parallels which it affords to compositions in the West.

From the introductory lines of the romance we learn that the writer of this poetical work was a Turk, and in the colophon we are told his name, Mirzā Daulat Rizā Bēg Ilanīkī (میرزا دولت رضا بیگ حنیکی), and that he wrote the poem in the years A.H. 1033–1036 (A.D. 1621–1624). According to his own statement, he wrote it originally in Turkish, and afterward translated it into Persian. It is a result of this process, evidently, that a few Turkish words are to be found in the book. Thus, the words *şık* (شی), 'thing,' and '*anrat* (عورت), 'woman, wife,' which are Arabic-Turkish, have occasionally been employed, instead of the regular Persian terms, which are *čiz* (چیز) for the former and *zan* (زن) for the latter.

A similar work which our writer may have taken as a model is the *Naurūz ū Gul*, composed by Khwājā Kirmānī (خواجر کرمانی) in A.H. 742 (A.D. 1341–1342); cf. Ethé, in *Grundriss der Iranischen Philologie*, ii. 249. According to Erdman, *ZDMG.*, ii. 212, the manuscript of this poem in the University Library of Kasan was copied by Hājī Šinānī (حاجی سنانی) at Samarkand in A.H. 1038 (A.D. 1629), and was dedicated to the vizir

Tājuddīn Aḥmad Trāqī (تاج الدین احمد عراقی), and comprised 5230 half-verses or 2615 full verses. Another copy of Khwājā Kirmānī's work is found in the British Museum; it was probably made by one Tūrānshāh (توران شاه), according to Rien, *Catalogue of Persian Manuscripts*, ii. 867 and 622. The title of the book is there given as *Gul ū Naurūz*, precisely as in our manuscript, whereas Hājī Sinānī, according to Erdman, calls it *Naurūz ū Gul*, the order of the names being reversed. There is still another book of the same nature by Maulānā Jalāl uddīn Aḥmad of Shīrāz (جلال الدین احمد شیرازی), commonly called Jalāl Ṭabīb (جلال طبیب), composed in A.H. 734 (A.D. 1334), and dedicated to the Prince Giyāth uddīn Kaikhusrau; cf. Rien, *Catalogue of Persian MSS.*, ii. 867; Ethé, *loc. cit. supra*; Danlatshāh (ed. Browne, p. 298); Pizzi, *Storia della Poesia Persiana*, ii. 210.

With the exception of the title, *Gul ū Naurūz*, almost all the names of the persons and places connected with this present romance are different from those mentioned in the manuscript of Khwājā Kirmānī, as briefly described by Erdman and Ethé. Khwājā Kirmānī, for example, says that Naurūz was the son of Shāh Fīrūz (شاه فیروز), of Khorāsān, and Gul was the daughter of the Byzantine emperor (قیس روم). The present manuscript, on the other hand, says that Naurūz was the son of Shāh Ferukh (شاه فرخ) of Nan Shād (نوشاد), and that the father of Gul was Mushkīn Shāh (مشکین شاه) of Ferkhūr (فرخار). A great number of similar divergences in names and incidents might be noted, as far as can be gathered from so scanty a description.

With reference to the *Gul ū Naurūz* of Jalāl Ṭabīb, I cannot judge, as no detailed information is accessible to me beyond the brief statements of Rien, Ethé, and Pizzi; but the introductory verses of all three manuscripts vary. The opening lines of Khwājā Kirmānī's poem, according to Rien (*Catalogue*, ii. 622), run:

بنام نقشبند خلوت خاک. عذار افروز مد رویان افلاک

The manuscript of Jalāl Ṭabīb begins thus, according to Rien (*Catalogue*, ii. 867):

ثنائی در خور آن حضرت پاک نیاید در وجود از ذرّۀ خاک

The beginning of the Columbia manuscript, on the other hand, is different from both the others, and runs as follows:

خداوندا دلم را تازه گردان رضائی را بلند آواز گردان

So much may be said by the way of general introduction. We may now turn directly to the work itself.

The manuscript as it lies before us makes a volume of 66 folios, each measuring $12\frac{1}{4} \times 7\frac{1}{8}$ centimeters, size of the written portion, 21×11 centimeters size of the whole page. It is bound in maroon leather, and the tops and edges of the pages are appropriately gilded. The first page is illuminated and the remaining ones are sprinkled with gold and framed with gilded marginal lines.

The writing is in a good clear *ta'liq* hand, two columns of 12 lines to the page.

Among the peculiarities of the writing may be noticed the occasional use of ج for چ. In cases where the long straight line is used for the letters س and ش, the former is sometimes distinguished by three dots below the line (ـــ).

Turning to the meter of the poem, it may be added that the work is in the *mathnawī* (مثنوی) form, and consists of 1560 rhyming couplets. It is divided into 126 sections, which are indicated by rubric headings in the manuscript.

The first six sections (§§ 1-6) of the poem are devoted to an invocation of God for divine grace and inspiration for the task, and there are the usual ascriptions of praise to the deity and to his prophet Mohammed, whose ascent into heaven is briefly described according to the Koran. The seventh section (§ 7) is a eulogy of the great Moghul ruler Shāh Jahāngīr (شاه جهانگیر), to whom it should be said that the writer dedicated his poem. The eighth section (§ 8) is a reflection on the existing lack of faith in the world. In the ninth section (§ 9) the author recounts the inspiration he has received in a dream to

write the book. With the tenth section (§ 10) the poet is at last ready to begin the romantic story, the narration of which occupies the remaining 116 sections. The main parts of it may be briefly epitomized in the following paraphrase.

In the country of Nan Shād (نوشاد) in Persia (?) there was a great and famous king named Ferrukh (فرخ), whose happy reign was marred by the sad fact that he had no son to succeed to the crown. After many years of expectation and earnest prayer, a son was at last born to him on the first day of the new year. It was for this auspicious reason that the child was given the significant name of New Year's day, or Naurūz. The birth and childhood of the boy are depicted in a section (§ 11) of 20 lines. While still in his boyhood the future hero became well versed in every branch of science and learning; and in time, when his strength waxed, he grew also to be a mighty hunter, an accomplishment which was as much admired among the ancient Persians (cf. Herodotus, i. 136, and Xenophon's *Cyropædia*) as it was in the days of Nimrod or Behram Gur.

The poem then proceeds to descant upon the charm and attractiveness of the youth's personality, and recounts how on one occasion, Narcissus-like, he was struck by the marvelous beauty of his own face, which he saw reflected in a cup of wine. When the power of the wine of which he had partaken overcame his senses, Naurūz fell asleep, and in his dream beheld a vision of a lovely maiden, a girl of surpassing beauty, the fair Rose. He became intoxicated with the charm of the lovely vision, and, like Shelley's Alastor in search of the Arab maid, our gallant Naurūz betook himself to the desert, trying to realize in waking the truth of his rapturous dream.

In his wanderings he encounters a caravan and falls in with a member of the company who bears the name of Nightingale, Bulbul, and the latter extends to him the hand of sympathy in the longings of his heart. Bulbul tells him that the image he beheld in his vision was none other than Gul, the beautiful daughter of Mushkīu Sbāh of Ferkhār, which was the native land of Bulbul himself (§§ 12-19). Upon hearing this, the joyous Naurūz despatches Bulbul at once to Ferkhār, to seek for Gul and to convey to her the message of his love (§ 20).

The faithful Bulbul succeeds in obtaining the Shāh's consent for his daughter to be betrothed to Naurūz; but the suit of the

lover is opposed by a cruel woman, Sūsān (سوسن) by name, the governess of Gul. After being rebuked by Gul and liberally bribed by Bulbul, Sūsān is won over, and not only makes an apology to Gul but even acts as a go-between (§§ 21-29).

But the tardy foot of time moves more slowly than ever for the impatient Naurūz, whose anxiety allows him no repose and impels him to wait no longer for the lingering Bulbul to return. He wanders again into the desert. Upon seeing his son's distress, Shāh Ferrukh decides to send Naurūz with a large army and vast treasures directly to Ferkhār.

On the way, Behman (بهمن), the chief officer accompanying Naurūz (he is spoken of as an Abyssinian (حبش),—unless *habuš* is simply 'servant' here), opposes the young lover's plan of going to Ferkhār, saying to Naurūz that it would be a great humiliation in case Gul should refuse his suit (§§ 30-39). Failing to induce the ardent Naurūz to return, Behman takes a large portion of the treasures and of the army, and goes back to the capital by night. Naurūz, however, arrives safely at Ferkhār and is welcomed by Shāh Mushkīn, the father of Gul. His suit is presented in person, and every preparation is made for the young prince to receive the hand of the maiden (§§ 40-58). But an obstacle unexpectedly arises; a rival appears on the scene. The Khāqān (خاقان) of China sends a more imposing embassy for the purpose of securing the hand of the lovely Gul for his own son. His suit is crowned with the Shāh's favor; he wins the day, and carries off the unhappy Gul on the road to China (§§ 59-73). But Naurūz follows the party on the journey eastward (§ 74). One stormy night he tries to carry off Gul to his own country (§ 75); but the pair is overtaken in the mountains, and brought back as captives by a slave of the Khāqān, who is named Yeldā (یلدا) (§§ 76, 77). Nothing daunted, however, the lovers make a second attempt to escape, and this time they succeed. Gul, according to the custom of the country, is sent to the temple to learn the method of worship. Naurūz also finds his way thither, but both of them being conscience-stricken at the practice of idolatry, determine upon flight. The Khāqān and the whole of Čīn and Māčīn (چین وماچین) are greatly excited; men are sent in every direction in pursuit, but without success. Gul and Naurūz with great

difficulty escape an assemblage of *duers*, whom they meet in the desert. Soon after this they arrive at the palace of the Sheikh of Najd (شيخ نجد), who attempts by means of a witch's charms to win the heart of Gul. When sho and Naurūz perceive this they leave Najd (§§ 78-82). They manage to reach Baḥr Qulzum (بحر قلزم), ancient Clysma, and, after the familiar manner of both Eastern and Western mediæval romance, embark in a boat, which soon suffers shipwreck in the gulf of Oman. All this, as my friend Professor Jackson reminds me, sounds much like incidents in the old English romances or the *Gesta Romanorum*. Though separated, the lovers, of course, are not suffered to perish. Gul, floating on the sea, is found by a diver (غواص) in the pearl fishery of the king or prince of Aden, which is one year's journey from China. The diver brings her to the shore to take her to the king. On the way they encounter several fierce lions, which sho kills on the spot. The report of her prowess soon spreads abroad. The king of Aden has her summoned into his presence, and charmed by her beauty as well as by her heroism receives her with great honor (§§ 83-98).

The fortunes or misfortunes of Naurūz are equally romantic. He floats on a piece of timber to the Arabian shore, and enters a fisherman's hut close by the sea. The fisherman, being too poor to supply his needs, informs the Vizir, who also dwells near. The Vizir, after entertaining Naurūz for a while, takes him to the king of Yemen, who honors him with high office and rank (§§ 99-107).

But an old-time feud existed between the king of Yemen, to whom Naurūz had gone, and the king of Aden, in whose army Gul was commissioned. So chance brings it about that war is declared between these hostile rulers. The story of the conflict follows. After several engagements, circumstances dramatically bring Naurūz and Gul face to face in battle. Each recognizes the other, and the result may be imagined. The war is stopped at once and lasting friendship is established between the two kings (§§ 108-118). Gul and Naurūz, by the permission of their kings, make a pilgrimage to Mekka and Medina.

Meanwhile the kings Ferrukh and Mushkīn Shāh, from the time they hear of the flight of their children from China, are in

a state of great uneasiness, and wander about the world in search of them. Finally they also conclude to make a pilgrimage to the sacred land, to pray there for the restoration of their dear ones. At Mekka the parents and the children meet unexpectedly and have a happy reunion. The party returns home in peace, and Naurūz succeeds his father at the latter's death (§§ 119-126).

Such, in brief, is the romance of Gul and Naurūz. The whole story, as it seems to me we are justified in believing, contains certain mystic elements. The names of Gul, Naurūz, Sūsan, Bulbul, etc., may be not without symbolic significance. The Persian New Year occurs in the Spring, and the love of the springtime for the nightingale is as old as Persian lyric poetry. The lily belongs rightly amid the same mystic company of flowers; and numerous other symbolic phrases like the 'fervent heat of Naurūz,' 'love opening the breast of the rose,' or 'the sunny days of the spring time causing the bud to blossom,' recall the allegorical energy of the Iranian mystic poets.

In conclusion I may say that I hope to gather some more details regarding this interesting work in connection with the other Persian poems that bear the same title.

Remarks on the Form of Numbers, the Method of Using them, and the Numerical Categories found in the Mahābhārata.—By E. WASHBURN HOPKINS, Professor in Yale University, New Haven, Conn.

THESE Remarks on Numbers are incidental notes which I made a short time ago, while collecting from the great Hindu epic some material intended for another purpose. They were presented in outline as one paper at the meeting of the Society in April of this year, but as they are rather too long to be printed all at one time in the *Journal*, I purpose to bring them out in sections in successive half-volumes. The general plan of arrangement is as follows:

The form of epic numbers.

How numbers are handled in arithmetical processes.

How space (dimension, etc.) is measured (norms and syntax).

Time-words and methods of measuring time (months, asterisms, etc.); syntax of time expressions; time-phrases; age; epic dates (excursus).

The epic world according to the categories of the poets (physical, ethical, etc.).

Various problems, historical as well as philological, serve to relieve the dryness of the subject, but these will be touched only by the way, as my chief object is to get data together, though I have not avoided mention of obvious differences in matters pertaining to the growth of the epic. The present paper includes the first three divisions. The next will treat of time-words (to epic dates), with subsequent divisions according to circumstances.

Before taking up seriatim peculiar forms of numbers, I would call attention to certain fanciful number-words which belong to the later epic. The most striking of these is *daṣārdha*, not merely as "five," *daṣārdhasamkhyāḥ* (*ṣarāḥ*), i. 188. 20; *daṣārdhahavirātmakāḥ*, xii. 47. 42,¹ but as "fist" (the half-ten fingers):

¹ Compare the abstract, *daṣārdhatā=pañcatva*, xii. 187. 27, dissolution into five elements (ib. 291. 10, *daṣārdhapravibhaktā*).

and (without the implied complement) stands alone for a Yuga and for the group of three fires (ref. PW.); *trika* is used sparingly, *pañcatrika*, having a triad of five, fifteen; *tritva* is a late solecism (ref. below). A group of four is *catuṣṭayam* or *catuṣkām*; a group of five, *pañcakām*, etc.

Metaphorical number-names I have illustrated by a passage cited in my *Great Epic*, p. 206, where *varāṅgi* is 5×7 . The passage, however, is late and unique in the epic.

I turn now to the regular numbers.

The epic is not so careless of art as to change the grammatical form of all the numbers, but it contains several abnormal numerals. I shall speak of the form of the numbers three, four, seven, eight, nine, ten, adding something on derivatives of the word for one, and the use of the higher numbers.

Tri. In the Sanatsujāta Parvan, which is a late imitation of ancient matter, occurs this verse :

v. 43. 15, *tathā ṛṣṇāsāni daṣa tri, rājan.*

In čl. 19 are mentioned seven cases of cruelty, which apparently led Telang, *SBE.*, viii. p. 168, to translate the words above "and likewise the seven cruelties." But the seven of čl. 19 are expressly differentiated from six that precede, *ete pure sapta*, "seven other cases," and it is these six and seven together which make up the thirteen, *daṣa tri*, mentioned in the introductory fifteenth śloka. Consequently, Nilakaṇṭha is right in saying that *daṣa tri* is for *trayodaṣa*, or, in other words, *tri* here stands for *trīṇi*.

In the last number of this *Journal*, xxii, p. 345 ff., I pointed out an epic case of a dropped ending, *daṣa-dvādaśubhir nā 'pi*, where the *nā* shows clearly that *daṣa* stands for *daśabhiḥ*, which has lost its ending because it is supplied by the next word.¹ A still more extraordinary case of dislocated ending is found in that book which historical critique has pronounced later than the early epic:

iv. 62. 14, *avaruddho 'carat Pārtho varṣāṇi tri daśāni ca,*

¹ The meter here shows that the corrupt form is intentional. The case differs, therefore, from that of the ÇB. *yajus*, *Mitrāya Varuṇāya ca*, which all MSS. of JB., Professor Oertel informs me, have as *Mitrā-varuṇāya ca*, since the latter form spoils the meter.

where *tri daṣāni* stands for thirteen. Here we cannot read *tri-daṣāni*, for two reasons. First, this word means thirty and not thirteen, and thirteen is the required meaning. Second, even if we took *tridaṣāni* as an adjective meaning thirteen, there would still remain the *ca*, which only a very strained interpretation could dispose of otherwise than as Nīlakaṇṭha has said (*trīṇi ca daṣa ca*). There remains only the explanation that in *tridaṣāni* the poet has transposed the endings for metrical purposes and not only written *tri* for *trīṇi* but *daṣāni* for *daṣa*, helped thereto undoubtedly by the preceding *varṣāni*. Such a monstrosity is one that need not surprise us among the many evidences of lateness found in the Virāṭa, which, as a whole, lies nearest to the pseudo-epic in its disregard of Sanskrit grammar as in other particulars. So in Virāṭa we find the slovenly construction of iv. 39. 10, *jītvā vayanī neṣyati ca 'dya gāvaḥ*, "conquer us and carry off the cows," a verse admitted by Nīlakaṇṭha (compare 47. 34), and quite comparable with the looseness of form found in Čānti.

The PW. has already noticed, i. 113. 21, *virṭya tridaṣa niṣāḥ*, for *triṇcat*; *tridaṣān*, iii. 123. 1 (*Agrinān*); and *tridaṣāḥ*, $3 \times 10 (=33)$ gods, *passim*.

Catur. Professor Holtzmann, in his *Anhang* to Whitney's *Grammar*, § 482, mentions *caturāḥ* as nominative in xii. 24. 27 and *catur* as accusative, *vedān*, in iii. 45. 8. Both forms are found elsewhere as well. In vii. 149. 22, *gāyanti caturo vedāḥ*; vii. 202. 74, *vedān kṛtvā 'tha caturāḥ catur agvān nuhegyavāḥ*. Also in viii. 34. 70, *tathāi'va vedāḥ caturo hayāgryāḥ*. All these passages are laudations or describe metaphorical "cars" of religion, the four Vedas being made the steeds. Unique is viii. 20. 49, *sa tu dvipaḥ pañcabhir uttameṣubhiḥ kṛtaḥ ṣaḍaṇiṣaḥ caturo nṛpaḥ tribhiḥ* ("the elephant with five arrows made six-fold [cut into six pieces] and the king with three (arrows made) four"), *kṛto daṣāṇḥaḥ kuśalena yudhyatā yathā haviḥ tad daṣa-dāivataṁ tathā* ("was made ten-fold [cut into ten pieces] by the skillful warrior, like an oblation offered to ten divinities").

Here *caturāḥ* is plainly *caturāṇḥaḥ* in sense, but as to the form, it is difficult to say whether by analogy with late compounds in *catura* it is nominative singular, or by analogy with "make one four" accusative plural, or by analogy with the cases above, nominative plural. I think it belongs to the last

group, "made-six-fold, made four." The awkward sentence means as a whole that the six parts of the elephant and the four parts of the king were like an oblation cut into ten parts.¹

Saptan. By analogy with the cases already mentioned it may be suspected that *sapta* stands for *saptasu* in xii. 343. 106, where Kaṇḍarika is said to have arrived at Yoga-perfection because of his excellence, *mukhyatvād*, "reflecting often on the sorrow caused by birth and death, *saptajātigu*." The commentator says "the sorrow of seven births," *sāptajānīkām*, which would imply "in seven births," and not the compound "among those having seven births," which is the natural interpretation. As to the meaning, it is probably the indefinite sense of "many," which in most examples is hard to verify (i. e. to show that 'seven' is used without any reference to a fixed number). For in "seven paces," "seven flames," "seven seers" and "seven rivers," seven, for all we know, may have been intended literally. There are two cases, however, where *saptan* clearly means "many" simply; once where, instead of elephants *tridhā prasarantaḥ* (an oft-repeated phrase), we find *saptadhā*; for the parallel *sarvataḥ* is used in the same way:

i. 151. 4, *trihprasarutamudaḥ*,

vi. 64. 58, *tridhā rājan prasaranto madam bahu*,

vii. 26. 6, *kṣarantaḥ sarvato madam*,

vi. 95. 33, *saptadhā sravatū madam, parvatena yathā toyam
sravamāṇena sarvagaḥ*.

The second case is where *bhuvanāni viṣvā* interchanges with *bhuvanāni sapta*, or, in the gender of the later epic, *bhuvanāḥ sapta* (see hereafter).

Aṣṭā. The final vowel is short or long according to metrical convenience, long when the length is indifferent:

iii. 102. 3, *aṣṭiḥ śatam aṣṭāu ca navā cā 'nye*,

aṣṭāu required by the meter;

vii. 146. 134, *akṣāuhīṇīr aṣṭa hatvā*,

aṣṭa required by the meter;

¹ The *havis* called *daṣḍāivutam*, represented here by *daṣḍāṇca* (the man and elephant together) "in ten parts," is called *daṣḍāṇço homaḥ* in xviii. 6. 105.

xiii. 111. 69, *bhūtvā nāno 'ṣṭa varṣāpi*, also required.

v. 86. 9, *daṣṭu 'ṣṭa ca*, and vii. 82. 8. and 16, *ṣatam aṣṭa ca*, cases of diiambus, brevis required;

ix. 46. 74, *mahiṣam eā 'ṣṭabhiḥ padmāḥ*, short vowel required;

viii. 22. 6, *aṣṭābhīr api, Bhārata*, long vowel required; ib. 17, *Nakulāya ṣatāny aṣṭā*, indifferent.

Respecting the alleged difference between *aṣṭāgara* and *aṣṭa-gara*, PW. i. 531, there are two verses, one of which is

viii. 67. 6, *aṣṭāgarām aṣṭa ṣatāni bāṇān* (sc. *vahanti*),

which Nīlakaṇṭha interprets as "eight eight-cow wagons carry hundreds of arrows," his *teṣāṃ aṣṭāgarām* implying a short genitive modelled on *garām* (*aṣṭān gāro yasminś tat aṣṭāgarām ṣakataṇi teṣāṃ aṣṭāgarām aṣṭa aṣṭasaukhyāni ṣakataṇi, nuḍabdhāva āraṣaḥ, ṣatāni bāṇān anekaṣutasaukhyān vahanti*). One is tempted to read *aṣṭāgarāny*, as in the next passage, which, however, has the short vowel:

viii. 20. 30, *aṣṭār aṣṭagarāny āluḥ ṣakataṇi yud āyudham aluastad aṣṭabhāgena Drūṇiṣ cikṣepa, mārīṣa*,

"Droṇa's son, Sir, threw as many missiles in an eighth of a day as eight eight-cow wagons carry," which repeats with elaborate definiteness the statement of the preceding verse that the hero poured arrows as Pāṇsa's "younger brother," Pāṇsunja, that is Parjanya, pours rain. The scene is late and instructive for the critique of the epic. The hero here particularly lauded is a certain Pāṇḍya, quite unnoticed previously but now extolled as the ablest warrior on the Pāṇḍu side. It is he who, as explained above, is quartered and made with his elephant a ten-fold oblation. There appears to be no grammatical difference between *aṣṭāgara* and *aṣṭagava*.¹

In regard to *aṣṭacakra*, the Petersburg lexicon gives only the Vedic *aṣṭacakra*, but *aṣṭacakra* is found (of Hari's wagon, *gāna*) in vi. 8. 16; xii. 335. 11; and (of a demon's car, *ratha*)

¹ Compare for these compounds, *hastiṣaḍgava*, viii. 88. 7, of a war-car, and *ṣaḍgaviyaṃ ṣakataṃ*, ib. 76. 17. In xii. 37. 32, sixteen cows are yoked to a war-car.

in vii. 156. 61; 167. 38; 175. 13; and (of an *aṅgaur*) in vii. 175. 96. In the first three Droṇa cases, *samāyukta* is added, a set formula. In the first case, from Bhīṣma, the word also begins a *pathyā* and the whole verse is repeated in the next Çānti case, *astācakrañ hi tad yānam bhūtayuktam manoranam*. As the last case, too, stands at the head of a *pathyā* and in this situation *astācakrañ* would be metrical, the choice must be due to preference for the later form.

Nava. The Vedic phrase *jaghānu navatīr nava* I have already, *Journal*, vol. xxii. p. 389, located in the epic, ii. 24. 19. To this example should be added also the same phrase occurring at ix. 51. 36 and xii. 22. 11. The last is farthest removed in context from the original, while the passage in Çalya gives the Vedic text very closely in making the weapon the bones of Dadhīca (epic form):

RV. i. 84. 13, *Indro Dadhīco astabhir vṛtrāṅy apratiṣkutaḥ
jaghānu navatīr nava,*

Mhb. ii. 24. 19, *yena (rather) Çakro dāmarānām
jaghānu navatīr nava,*

ib. ix. 51. 36, (*Dadhīca, tasyā 'stibhiḥ*) *dāitgudānavavāṛāṇām
jaghānu navatīr nava,*

ib. xii. 22. 11, ("Indra the son of Brahman became a Kṣatriya
by his acts and") *jāñānuṃ pāpacrātūṃ
jaghānu navatīr nava.*

In each case (but the first is not annotated) Nīlakaṇṭha says that the number is (not ninety-nine but) eight hundred and ten (nine nineties). In i. 32. 24, *navatyā navaatīḥ (kṛtā)*, v. l. *navatyā*, the multiplication is definite, 8100.

To the forms recognized in grammars and lexicons I am tempted to add *navāḥ* as instrumental plural. Otherwise we must assume that *nav* arrows are especially used when their number is ninety, whereas generally there is a natural predilection for such conjuncts as six and sixty, seven and seventy, and nine and ninety. So by analogy with *navatyā navabhiḥ ca* in viii. 30. 25 we find *navāḥ navatyā ca śarāḥ* in viii. 90. 60. At the same time, "nine" and "new," owing to their like sound, are found together, as in viii. 48. 50, *navāḥ navabhir āyusāḥ*, but in the case above *ca* seems to show that *navāḥ* is a numeral.

I would remark, by the way, on the partially formulaic character of most of the shooting in the battle-scenes. The test of an archer's skill is not only to shoot one arrow well but to shoot many arrows at once. Among digits the object shot at determines, for the main part, the number of arrows used. With four arrows one shoots the four steeds; with three, the arms and forehead or the three charioteers, etc. But even here there is an occasional irruption of eights, the favorite number of the later epic. Thus in viii. 89. 63, ten and eight; 65, eight; 68, eight hundred and eight thousand; 76, eight; all in a hunch, though up to this passage the whole preceding eighty odd sections show only half a dozen cases. So in the late wonder-tales of the first book, larger numbers are by preference expressed in terms of eight or its multiples, e. g., i. 100. 20, to express thirty-six years, "years sixteen and eight and also four and eight more." I shall have occasion in a later section of this paper to show how this Buddhistie number has driven out the more ancient holiness of nine.

In the "down-pour" of arrows said to be shot by decades there is a certain preference for stereotyped groups. Twelve, fourteen, fifteen, and sixteen are shot more often than seventeen and eighteen. Twenty-one, *trisaptan*, is a favorite for the same reason that endears *trisaptati*, as three and seven(ty) are sacrosanct numbers. In this decade, twenty-five is also a favorite, while twenty-seven is the rarest; in the third decade, thirty-six is the conventional number, with a few cases of thirty and thirty-two. The fourth decade is almost ignored; the fifth appears rarely as fifty; then come sixty and six and sixty (less common are three and four and sixty); seventy and seven and seventy (less common are two and three and seventy); eighty (rare); ninety (nine and ninety as above); and occasionally one hundred, three hundred, five hundred, and even ten thousand arrows all discharged from one bow at one shot!

Daṣa. The *dāṣatā* of vi. 2,700 (rightly condemned in PW.) is replaced in B. 61. 21, by *triṅṣatā*. The epic has *daṣati*, analogous to *saptati*, *nūvati*, not as decade but as one hundred (as who should say "ninety, tenty"), the form, however, being formulaic like *navatīr nava* (above), and probably a new formation, as it occurs only in the later part of the epic. The decisive cases as regards the meaning are (i. 16. 8-13 and) v. 108. 14, the latter:

Oṃkārośyā 'tha jāyante śtayo daṣaṭīr daṣa,

where a "thousand branches" is Nīlakaṇṭha's undoubtedly correct interpretation. In xiii. 30. 21, the ten might be decades or hundreds (of days), though here also Nīlakaṇṭha admits only the latter and says the word is *Analogie-Bildung*.¹

Holtzmann, *op. cit.*, § 483, has spoken of *saptadaśeṣu* at iii. 268. 11. I think Nīlakaṇṭha's explanation (having eight royal acts and nine *siddhis* and *śaktis*) is quite inadmissible. Families "having seventeen" would be more likely to be thought sinful than virtuous. Compare the "seventeen fools and sinners" of v. 37. 1-6. Then in v. 36. 22, the "great families" are defined as those which *ete saptayaṇu vasanti*, "seven virtues" being their possession, which suggests *saptayaneṣu* as the right reading. But here the meter alone is enough to change *saptodaśeṣu* to *saptodaśeṣu* (*vayan paṇaḥ saptodaśeṣu Kṛṣṇe kuleṣu sarve 'namameṣu jātāḥ*).

Higher numbers. Nineteen is not *unadāśa* in the epic but, as in Latin *undeviginti*, *ekonaviṅgati*.² In xiii. 107. 87, *ekonaviṅgat* serves as an ordinal, *ekonaviṅgati dine* standing parallel to *śodāśe*, *saptadaśame*, *aṣṭādaśe*, and *pūrṇe viṅge* (*divase*). At C. xi. 561, *pariviṅgat* offers a form parallel to *triṅgat* (also *triṅgatī*); but B. 19. 15 has *pañcya Kṛṣṇa* for *pariviṅgat* (*Vicīnatim*). In i. 2. 330, B. has *viṅcat*, C., *triṅcat*; ib. 379, *viṅcat chlokaṅgatāni*. The late Rāmāyaṇa also admits *viṅgat* in *ekaviṅgat* (ref. PW.). The epic accusative of the following decades is frequently identical with the nominative; for example, in i. 86. 15, *abhakṣaḥ śoradus triṅgat*, either form doing duty for either case. Examples of *triṅgat* and *pañcāgat*, as accusatives of object and duration respectively, are given below, and in xiii. 168. 5 and 27, respectively, *pañcāgat* is accusative, *śoreorīḥ pañcāgat*, and *pañcāgatama* is nominative, *aṣṭapañcāgatām rātryaḥ śayānasya 'dya me gatāḥ*, as in the further case cited below. The corresponding ordinals in the text (the *adhyāyas* are counted by *-tama* forms as well) are short, *ekaviṅga*, *dvāviṅga*, *trayaviṅga*, *caturviṅga*, *pañcaviṅga*, *śodaviṅga*, *saptaviṅga*, *aṣṭaviṅga*, *ekonatriṅga* (compare *ekonazṣṭi*, *ekonasaptati*, i. 2. 204, 289, etc.), xiii. 107. 93-121.

¹ For thousand the later epic uses *daṣaṭam*: *tatthe 'śfīndm daṣaṭam prāpnuvanti*, xiii. 102. 86, etc. (meter, *Great Epic*, p. 305).

² Or *viṅgaṭīr ekonā*, vi. 4. 15.

Before leaving this subject I would say a few words on certain declined forms of *eka*, not because they are irregular as forms, but on account of the way they are used. The first point is the parallelism between the adverbial ablative and the instrumental, as shown in

v. 43. 21, *tribhir drābhyām ekato vā 'rthito yaḥ*.

According to the commentator, *arthito* here means possessed of or furnished with, *artha*, a meaning not usually recognized, but in accordance with the sense of the passage, which says that one who has in his power all the twelve virtues is fit to rule the earth, while "he that is furnished with three, two, or one," is to be known as one having wealth, *tasya sramo asti 'ti sa vedī-taryah*. In any case, *ekataḥ* is used freely here as a correlative of the instrumental.¹

The same form has a meaning almost recognized in the Pet. lexicon, which ascribes to it, besides the ablative sense and that of "on the one hand," the meaning of "together," or "in one." By a slight extension of meaning *ekataḥ* means altogether, solely, or, quite literally, one-ly, only, as in vi. 107. 20,

*yathā prajvalitam ruhniṃ patāṅgaḥ samabhidhravan
ekato mṛtyam abhyeti tathā 'ham Bhīṣmam ūyicān,*

"As an insect entering a blazing fire meets only with death, so I, on having encountered Bhīṣma." This, at least, is Nīlakaṇṭha's exposition, who takes the word as equivalent to (*ekam*) *kevalam*, *mṛtyam eva*, rather than as contrasting the insect "on the one hand" with the speaker. The plural *eko* meaning "alone" may be used as well as the singular, *nāi 'ke 'śnanti suśampannam*, "eat dainties alone," xii. 228. 44.

Examples of the correlation by two *ekataḥ* are not uncommon. One is found in

xii. 12. 12, *ekataḥ ca trayo rājan yṛuṣṭhācṛanno ekataḥ*,

where against the other three orders is weighed that of the householder, which is said to be equal to all the others put together.

¹ For the usual meaning if applied here would be "he who on the one hand is furnished with three or two." Compare the parallel use of *prathamataḥ* in xii. 82. 1, *eṣā prathamato vṛttir dvitīyāṁ ṣṣu, Bhā-rata*.

In the following stanza I think we may see an extension of Vedic usage surviving in the epic:

xii. 21. 7, *anye sâma prayâṁsanti vyâyâmam upare janâḥ*
nâi'kaṁ na cā 'pare kecīd ubhayaṁ ca tathā 'pare.

The commentator admits the double negative as an affirmative and according to him the stanza would mean: "Some praise mildness, others praise a strenuous life, still others praise the one (Yoga-discipline, *dhyāna*), and others again praise both." But, although the affirmative double negative is not an impossibility, it carries with it a strength of affirmation¹ that is quite uncalled for in this passage, where *ekam* certainly has no right to be represented by *dhyānam*. In the continuation it is said that some sit in quiet meditation, some are active in governing, and others are *ekāntagūṇināḥ*, which may have led the commentator here to set up a third object of devotion. But with the antithesis of *ubhayaṁ* there can be no doubt that *ekam* is one of the two already mentioned, and the meaning to be expected is that some praise mildness, some praise energy, some praise neither, and some praise both; which, in my opinion, is what the passage was intended to mean when it was first written. In other words, for *nâi'kaṁ na ca*, we should read *nâi'kaṁ ca na*, which preserved the old phrase found in BÂU. vi. 2. 2, *nâ 'ham ata ekam ca na veda*; ih. 3, *tato nâi'kaṁ ca na veda*. Otherwise *na ca na* survives only in indefinites, *na katham ca na*, etc. The sense of *nâi'kaṁ* as "many a" is here excluded. This latter meaning is common, e. g., *nâi'kaṁ yogariparyayam (arūsam)*, "many an age," xii. 229. 49.²

¹ It is used, however, generally, where two clauses are distinguished, e. g., *na cāi'va na prayuṣṭā, saṁkīrṇam parivarjayet*, "not that one should not commit (these faults, but) one should avoid excess," xii. 56. 42; or in strong affirmation, *na sa yajñā na bhavitā*, i. 38. 2, "it will surely occur;" *naḥi tvāḥ no 'tsahe hantum*, xii. 227. 80, "assuredly I can kill thee." Compare the parallel in the same scene (repeated) in xii. 224. 38, *evam nâi'va na cet kālāḥ . . . pātayeyam ahaṁ tvā 'dya*, "I could kill you now; if it were not so, if Time did not (prevent)." Compare xii. 239. 4-6, ending *etad evam ca nâi'vam ca na co 'bhe nâ 'nubhe tathā*.

² In xiv. 49, a similar but longer string of opinions is given by *kecīd*, *anye*, *apare*, and *eke*, indifferently, ending with çl. 12, *sarvam eke praçaṁsanti na sarvam iti cā 'pare*, "some praise everything and others nothing."

In regard to the choice between *eka* or *ekatara*, the epic uses either, as in xii. 81. 9, *vyṇomy ekatarāṇi na ca*; 10, *ekasya jayam āgṛhse*, ("like the mother of two gamblers) I prefer neither, hope for victory of the one." In i. 119. 15, *vāsyāi 'kām takṣato bāhuṁ candanenāi 'kām ukṣataḥ nā 'kalyāṇaṁ na kalyāṇaṁ cintayann ubhayor layoḥ*, "not thinking ill or good to appertain to [these both] either of these, him cutting one arm with an axe and him anointing one with sandal-paste" (for *anyataram*). In triads, one, another, and a third, *anya*, *apara*, *para*; *eka*, *apara*, *eka*, and so forth, xii. 86. 30; 137. 4. Though *katara* is used quite regularly, *kim* may take its place, as in xii. 126. 16, where, after two are mentioned, we find *kim nu jyāyastaram*, "which (of these two) is more greater?" So *katana* and *ka*, xii. 167. 2.

On the form of other epic numbers I may refer to what has already been given in the Petersburg lexicon and in Professor Speyer's *Sanskrit Syntax*. I will only register another *pañcāśatani* (*pañcāḥ proktāḥ*) for *pañcāśat*, xii. 256. 8, and observe that *dvīsaptati* appears in Manu, vii. 157, but epic *deśasaptati* (in the same passage) at xii. 59. 71; at the same time remarking as to *śatā* for *śatāni*, in iii. 67. 6, where C. has *śatāṁ śatāḥ*, that masculine *śata* belongs to the more recent parts of the epic, whence *śatā*, like *vigṛā*, may have been the original. As to the feminines, *triśatī*, etc., which have been noticed by Speyer, *op. cit.*, § 294, these forms are also late in the epic, *triśatī* and *saptatṛiśatī* (i. 2. 324) and cognate forms are found in still later works. Further: besides *daśaśatani*, above (and *daśasahasram*), "a ten-hundred," there is the uncommon uncompounded singular form (as if plural), as in xiii. 112. 14-15, where, parallel to *daśaśatāni vedavidām* (in gl. 28), appears *brāhmaṇānāṁ śatāni daśa*.

The question as regards appositional construction may be discussed here though it pertains to syntax rather than to form. All substantive numerals may take this construction, *sahasram parivatsarāṇi*, i. 94. 41, etc., which is not irregular if we understand "years, a thousand," rather than "thousand (of) years." But with the higher numbers the noun is usually either compounded, *varṣāyatāni*, etc., or is in the genitive, *pariṣame-dhānām ayutam*, i. 95. 20.

The particular example just given has indeed a sort of stereotyped form, especially when "eleven thousand years" are referred to. As one says *bahuvargaṣaṁvān*, "many year-rows," c. g. xiii. 111. 98, so one says year-hundreds or thousands, *pañcavarṣaḥ*, etc., and uses a formula with eleven, ten thousand and ten hundred: *daśa varṣasahasrāṇi daśa varṣaśatāni ca*, iii. 12. 12; *daśa kalyāṇatāni*, ib. 200. 121. A modifying number is placed in the same construction, as a general thing, *ayutāni pañcāśat* (accusative) with genitive, xiii. 107. 31; *yudhāni varṣasahasrāṇi dvātriṅśat abhuvat kila*, "the war (of the gods and their elder brothers, the devils) lasted thirty-two year-thousands," xii. 33. 26. But here also a genitive is often found (more correct), *dee yugānāni sahasre*, xiii. 107. 113, etc., and an inverted order, as in *gaturvarṣa*, not as adjective but noun, is permitted, *vijayāḥ gaturvarṣāṇi (jīratī)*, xiii. 111. 86 (compare *gataśūradam*), in this instance due, perhaps, to the meter (to avoid a third *vipulā* after a trochee), but found also ib. 118, *kṛmī viṅśativarṣāṇi*. The very unusual construction found in i. 90. 1 is probably due to meter also. Here we have *sainvat-sarānām ayutāni śatānām*, "a ten-thousand of hundred years." Close by occurs another case of apposition, i. 93. 24, *tadā 'dadāni gāḥ śatani arhudāni*, "then I gave cows, a hundred hundred-millions."

An adjective may or may not agree with the implied genitive; both together, for example, in iii. 127. 2 and 13, *bhāryāśatāni sudṛṣṭānām* and *sudṛṣṭam*. Possessives, by the way, put the numeral either first or last, with possessive ending, *daśagu*, *sahasragu*, *gośatin*, xiii. 78. 11. Compare with the last, ib. 102. 43, *ya gosahasrī śatadaśa saunāni sanām*, *gavāni gati dadyāt ca*.

In regard to the syntax of decades, both genitive and apposition are common, and, beginning with *viṅśati*, we find, for example, *saṁśārān viṅśatin*, xiii. 111. 117; *triṅśad agnīm (ayajam)*, xiii. 103. 36. An interesting case historically is found in xii. 335. 35-37, *ekaviṅśatir utpannās te prajāpatayah smṛtāḥ*, not only because "twenty-one Prajāpatis" are late-epic, but because in the twenty names given as those of the sons of Nārīyaṇa one has been left out, the list being Brahman, Sthūṇ, Mann, Dakṣa, Bhṛgu, Dharma, Yama, Marīci, Aṅgiras, Atri, Pulastya, Pulaha, Kratu, Vasistha, Paramasthin, Vivasvat, Soma, Kardama, Krodha, Vikṛita.

The singular noun (an unusual case, compare Speyer, *S. Syntax*, § 294) occurs with *triṅgat* in xiii. 101. 15, *narakaṁ triṅgatam prāpya* (v. l. in C.). The plural decade also is found in the later epic, e. g. *triṅgata 'balā*, xiii. 103. 34.

The word *triṅgati* gives the name *Vivīṅgati*, a hero whose foregone fate is to be attacked with twenty arrows, in a repeated phrase: *Vivīṅgatiḥ ca viṅgatya viratham kṛtārān prabhuḥ*, vi. 117. 44=vii. 14. 27, etc. Such number-names are not confined to this hero and the three wise men, Ekata, Dvita, Trita, as they are found also in the satyrs' names, Aṣṭaka and Navaka, Skanda's goat-faced sons, iii. 228. 12; and in xiv. 4. 5 are mentioned Ikṣvāku's descendants Viṅga and Vivīṅga, who are unknown to the early epic but appear in the Purāṇic literature and the pseudo-epic so clearly associated with it.

An ordinal may be employed to take the place of a cardinal prefixed to another cardinal, as in i. 95. 37, *caturvīṅgam putragatam babhūva*, "a twenty-fourth son-century was born," that is one hundred plus twenty-four, which leads eventually to *caturvīṅga* being used for *caturvīṅgati* as in *caturvīṅgākṣurā* for the Gāyatri in the Harivaṅga (v. PW.), a meaning that may belong to the passage above as well.

The ordinal may (but does not generally) agree with distributed singulars, although combined with one, as in the verse of ii. 77. 31 repeated at xiii. 148. 61, *Duryodhanusya Kṛpasya Śakunec ca . . . Duḥśāntacaturthānām bhūmiḥ pāsyati goṇitam*. The ordinal in such a phrase as "five went and she too (as) sixth" needs no comment, and almost as common is such a turn as "they five set out having her (as) sixth;" but "with self as" is probably a late locution, though like the Greek idiom. It is found in (xii. 177. 52, *ātmanā saptaṁam kāmataḥ hataḥ*) the same passage from which examples of these constructions may be taken, namely, "seventh with himself (instrumental) went the king," xvii. 1. 23-25, *prasthitān Drāupadīsaṅsthān . . . bhṛāturaḥ pañca Kṛṣṇa ca saṅsthī evā cāi 'va saptaṁam*, followed by *ātmanā saptaṁo rājā nirgayāu Gajasāhavyāt* (late addition to Pāṇini, vi. 3. 6, PW. Rām. examples). As *ātman*, plural reflexive in singular, is not very fully illustrated in PW., I will add *nātharantam icā 'tmānam menire*, "they regarded themselves as having a savior," i. 183. 10.

The word *dvitīya*, "second," passes in compounds from the meaning "having as second" to that of "with," and independently to that of alter (ego), i. e., a friend. Familiar examples are those given by Speyer, *chāyādvitīya*, "(doubled) with his shadow," *asidvītiya* "seconded by his sword." An example of the personal construction is *Yayudhāadvitīya*, "along with Y.," xiv. 66. 11 (compare *dvitīyavat*, with instrumental, iii. 313. 47); *me dvitīyaḥ*, "my friend," xiii. 102. 57. The idiom, though perhaps not new, is not often used,—generally in late passages. Another case occurs in v. 50. 26, *Kṛṣṇadvitīyaḥ*, a passage not removed from the suspicion of being a late adornment.

The second ordinal answers to our "another" in such phrases as *dvitīyasāgaraniḥha*, "like another ocean;" while the "same" is expressed by the first cardinal: *ekaduhkhāḥ pṛthaksukhāḥ*, "having the same sorrows but separate pleasures," i. 10. 4 and 50; *ekārtha*, *ekabhojana*, "having the same aim, food," etc.*

Ordinals are occasionally used to indicate time. First in time, as contrasted with a subsequent event, is, indeed, generally given by *pūrva*, "former," *pūrvārūpāni*, "preliminary symptoms," xii. 228. 1; or *pūrvastāt*, "previously," i. 189. 22; but *prathamā* is used in the same way, *prathamam . . . parvāt*, "at first and afterwards," xii. 227. 68, etc. A "second time" is *dvitīyam*, iii. 60. 7; *dvīḥ pāram idān tṛtīyam*, "twice before and now for the third time," iii. 92. 9; *pāram . . . panāḥ . . . idān tṛtīyam*, "first, then again, and now for the third time," xviii. 3. 35; often as adj., *esā tṛtīyā jñānā tuva kṛtā*, "this is the third examination you have taken," ib. 32.

Before passing on to the epic methods of indicating arithmetical processes in detail, I may remark that with the exception of time (and religious observances),[†] where the duodecimal sys-

* The next stanza, xiv. 66. 12, has a form not recognized in the lexicon, *pīṭṛvasām*, as compared with the regular *pīṭṛvasāram*, the latter found in v. 90. 1; viii. 87. 16; xiv. 52. 53. Another late passage, vi. 116. 8, has *vasām* (like *duhitām* in Virāṭa; the last noticed by Holtzmann, *Anhang*, § 371).

† Occasionally ambiguous. Thus, *ekapatnītā* is the condition of having "the same wife"; but in R. v. 28. 13, *ekapatnītram* is having "only one wife." But the context makes the meaning clear.

‡ The expansion is rather wide on this side and varies between time-divisions (twelve years of fasting, sacrificing, etc.) and religious numbers, for example, the twelve syllables of the pāda of the *jagatī* verse, iii. 134. 19 (observe *navākṣarā bṛhatī*, ib. 16).

tem, 12, (30) 60, etc., is naturally selected, the decimal system is in ordinary use, both for the system of administration, xii. 87. 1 ff., and for the army, ib. 100. 31, etc. But it does not appear in any system of measures and only once is used of weights, though it should be added that the indications of values are so rare as to be of little importance (in iii. 134. 15, *astāu gaṇāḥ śatamānān caḥanti*; also *drauṇika*, ref. PW.).

COUNTING AND ADDITION.

Except in counting up money, *sampūḍayati*, and a poetical use of *yuj* and *yoga* (*navāi 'ra yogo gaṇanāme 'ti gaṇat*, of the nine digits in counting, iii. 134. 16; *tam mahūrtān kṣaṇān velān divasān ca gnyaja ha*, "she reckoned the time," ib. 296. 7), the usual word for count (counting is *gaṇanā*) is (*pra*)' *gaṇayati*, as in iii. 193. 28, *yatrā 'hāni na gaṇyante*, "where days are not counted;" *saṅgaṇanā nā 'sti*, "there's no counting," xiv. 73. 24; *gaṇayasva*, "count," iii. 72. 23; a word that passes into the sense of reckon, think, especially with *vi*, and regard, *na ca tām gaṇayān āsuh*, "disregarded them," viii. 37. 10 (*gaṇaye* in R. vii. 16. 42 appears as *gaṇe*, *mānṣān na gaṇe*, "I don't regard men"). Often follows the object compared in the instrumental, *na gaṇayāmy etān tṛṇenā 'pi*, "I do not care a straw for them," ii. 44. 34. Though *gaṇeya* is used, yet the corresponding adjective, calculable, is usually *parimeya* or *saṁkhyeya*, *saṁkhyā*, i. 74. 33; iii. 121. 11, etc.; i. 55. 2, *gāk-rasya yajñāḥ śatasāṁkhyā uktaḥ*; xiii. 107. 36, *saṁkhyā atigṇā*, "incalculable number." The idea of addition is given both by simple juxtaposition, usually prefixing, of cardinal or even ordinal (above) numbers, whereby it is sometimes doubtful whether, as in *daśagaṇana*, the modification is by addition or by multiplication; and by *adhikam*, as in *ekā śatādhikā* (i. 115. 21 and 41, *ekādhikaśatam pūrṇam*, *śatam puñcādhikam*, or prefixed); that of completeness, by *pūrṇa*, full, *sāgra*, all, and *api* and *pari*. Only the last requires a word.² The native scho-

¹ *tataḥ pragaṇayām āsuh kasya vāro 'dya*, "they calculated whose turn it was," i. 164. 14.

² For *pūrṇa*: "they say that ten hundreds are a full, *pūrṇa*, thousand," iii. 134. 17. For *sāgra*: *śatam sāgram*, "a whole hundred," xii. 112. 6; R. G. v. 7. 28; for *api*: "still be to thee even (full) ninety-nine sons, but abandon this one," *śatam ekonam apy astu putrāṇam, tyajāi 'nam ekam*, i. 115. 37.

liast gives to *pari* not the sense of completeness but of addition. Unfortunately he does not recognize the reading *parivīṇyat*, given above, but he renders *parivaturdaṣa* by fifteen at iii. 1. 11 and iii. 93. 28, and at ii. 3. 37 by "fourteen over" (more). On *pariṣodaya*, at iii. 78. 2, he says nothing. Completeness would seem to be the real meaning by analogy with *parisūcivatsara*, for example in iii. 108. 13 ff., *sahasraparivatsarāu . . . saṁvatsarasahasre tu gata dirge*.

Less common is the use of *uttara*. In i. 128. 18, *ḡatam ekot-tarāu teḡām*, "a hundred of them with one more." So in iii. 308. 1, *daḡottara* in the phrase *ḡukle daḡottare paḡḡe*, "on the eleventh bright half-month" (after ten full months). This accords not only with the scholiast's explanation but also with the usual allotment of ten (whole) months of pregnancy. Other examples of *uttara* as plus will be found correctly given in the Petersburg lexicon. Colloquial is *kīa uttarām*, "what more?"; "not to have *uttarām*" is to be unable to reply to a remark. Another word for "more" is *ārdhram*, over, beyond, with ablative. An adjective with *para*s or *param* also does duty for "more": *pādarakṣāo paraḡḡatāu* "beyond a hundred guards," vi. 95. 36; *paraśasahasrā cīprāḡ*, "over a thousand priests," xii. 38. 24; as *para* itself is used, *ekay cā 'pi ḡatāt paraḡ*, "one more than a hundred," i. 115. 1; *saṁvatsaraparāḡ kṣapāḡ*, "more than a year (of) nights," i. 221. 13 (viii. 90. 61; 78. 55, *paraḡḡata* and *paramḡḡata* have already been cited by Professor Holtzmann, *Zur Geschichte*, i. p. 161. Examples are not numerous). Nīlakaṇṡha follows an improbable tradition in attributing the meaning of "more" to *nīś* in *nīśtriṅḡu*, (a sword) "more than thirty" thumbs in length, *triṅḡadaṅḡulā-dhikāḡ*, iv. 42. 16, and elsewhere.

The word, *adhika* or *abhyadhika*, is used to convey a comparative notion, "more than," *dirḡhebhyaḡ cā manuḡyebhyaḡ pramāṇād adhiko bhūvi*, "greater in size even than tall men," xiii. 160. 15; which leads to the sense "superior to," *lāḡhave sūśṡaveṡu sarveḡām abhyadhikāḡ*, i. 132. 15, and even to that of "more happy." The ablative usually follows. Examples :

viii. 35. 4, *iḡvarād adhikāḡ*, (Brahman) "greater than Śiva."

vii. 74. 25, *yogāt tvatto 'dhiko 'rjunāḡ*, "superior to you through practice."

viii. 32. 61, *Karṇo hy abhyadhikāḡ Pārthāt*, the same.

viii. 83. 31, *abhyadhiko rasah*, "a better taste."

iii. 92. 15, *ko nāmū 'bhyadhikas tatah*, "more blessed (superior, better off) than he."

So (*abhy*) *adhikam* is used as the comparative-maker of adjectives: *Soma Rohiṣyām abhyadhikam pritimān bhūtaḥ*, "Soma was more in love with Rohiṇī," xii. 343. 57; *sā 'dhikāṁ gobhamānā*, "she was more lovely," i. 221. 20. But *adhika* may mean "too great," as in the only defect of Arjuna: *piṇḍīke 'ṣyā 'dhike*, xiv. 87. 8 (his cheekbones were too prominent).¹

SUBTRACTION.

The farmer's crop which is *ṣaḍbhāga-parigulha* is "cleared" of the royal tax, that is, the sixth part of it has been subtracted, xiii. 112. 19. The usual term to indicate that one number has been subtracted from another is *āna*, lacking, deficient, *pañcōnatā gatam*, "a hundred less five," iii. 72. 11. The independent use of this word is rare: *āne deiyajane gatvā*, "two incomplete leagues" (not quite two), ix. 5. 50. Nīlakaṇṭha recognizes the meaning of *nyāna*, the usual word for almost, in *avara*, which occurs in ii. 15. 22, *evam sarvān raḣe cakre Jyāsaṁdhaḥ gatā-rarān*, "he has overcome almost all a hundred," after it has been said that the kings overcome were a hundred and one, and just before the more precise statement that they numbered eighty-six and that fourteen remained, *ṣeṣā rājāṁḥ catuṣdaṣa*, gl. 18 and 25, to complete the tale of one hundred. As one and a hundred means only a large number, *nyāna*, "not quite," is supported by the context as the probable meaning of *avara*, and another passage also seems to show that this meaning, not recognized in the lexicon, which gives only "at least" with numbers, is possible. This is *na kaḥ cid aharat tatra sahasrāvaram arhaṇam*, "no one brought as tribute there less than a thousand," ii. 35. 11, literally "a tribute having a diminished thousand," so that *avara*, "less," forms the counterpart to *uttara*, "more." The other meaning, from the idea of "less," that of "at least," is, however, the usual one, as in *mantriṇaḥ trya-*

¹ For "a half more than all" we have "all and more by" in xiii. 125. 10 (extension of Manu iv. 85); *ardhenaī 'tāni sarvāni nṛpatiḥ kathyate 'dhikāḥ*. The scholiast says *adhikāḥ* is in antithesis to a little, *kṣudra*, king (equal to all these by a half is a great king).

rarāḥ, "at least three," xii. 83. 47. The "deficient" idea is common enough with nouns, for example, *gṛhṇātara*, "deficient in qualities," and glides naturally into the combination with numbers. Another example of the rarer sense may, I think, be found in xii. 321. 158: *sa (rājā) tūggaḥ daṣaḥbhāgṇa tatas te aṅgo daṣāvarāṇiḥ*, where "at least ten" scarcely makes the required antithesis of not even ten; for the sense seems to be that a very energetic warlike king "should be satisfied with a tenth and any other with still less." Opposed, by the way, to *arara* in the usual sense is *parama*. As shown above, *para* means "more;" but *parama* means "at most," *śahasraparama*, "at most a thousand," and this "most" is used for "whole," *trivarsaparamoṣita*, of seeds kept to the highest point of three years, or, as we should say, three whole years, xiv. 91. 16.

The "remainder" is *ṣeṣam* or *ṣiṣṭam*, as in *pañcāṣṭatām ṣaḥ ca ṣeṣam dīnānām tava jīvitasya*, "the remainder of thy life is fifty-six days," xii. 51. 14; *ṣiṣṭam alpam naḥ*, "our life's remnant is short;" *ṣeṣeṣa anyeṣu kāleṣu* "at other times, on remaining occasions," i. 122. 26; *ṣeṣe*, "as for the rest," *ayeṣadāḥ*, "wholly" (without remainder). The participle is more common than the noun, *varṣāṇi trīṇi ṣiṣṭāni*, "three years remain," xv. 20. 32, and so often, especially with other participles, *hata-ṣiṣṭāḥ*, "those left from the killed," still alive, xii. 54. 5, etc. The verb commonly used is *hiyate*, "is less" (*avaṣiṣyate*, "remains," *avaṣiṣṭam*=*ṣiṣṭam*), opposed to *atiricyate* "is more;" *saṁbhavati*, "is equal" (equal in size is generally *saṁmītan*); for "equal" as quit, the same word, *ubhayaṁ tat saṁbhūtam*, "both sides are quit," xii. 139. 24; equal, of scales, *tulā me sarvabhūteṣu saṁā tiṣṭhoti (samo 'haṁ sarvabhūteṣu)*, xii. 263. 10. Compare xii. 176. 10:

*ākīranyam ca rājyam ca tulayā samatolayam
atyaricyata dāridryam rājyād opī gṛhṇādhiḥkṛam,*

"I weighed in the scale poverty and kingship; poverty having more good qualities surpassed even kingship." The measure is given by *pramāṇa*, either of size (as usual) or of number, as in

¹ Just before, the *daṣavarga* is the group of imperial factors, but this does not seem to be referred to in this verse. The king, *sa*, is expressly *mahotsāha* and fond of military duties.

xiii. 107. 32, *lonānām pramāṇeṣu samam*,

sc. *phsararmugatasya*, (he is exalted in the Brahman world) "equally (as to years) with the number of hairs" (of a hundred bearskins). "Less" as inferior, secondary, is *gāuṇa* (see the next paragraph).

MULTIPLICATION.

While the word for times in its literal sense is (*-ratam*) *krtaḥ*, *pañcākrtaś caayo 'ktaḥ*, i. 197. 49; *triṣaptakṛtaḥ*, passim, the verb for times, multiply, is *guṇay*, whence *guṇita*, multiplied by (the number preceding), literally "qualified." In later texts, *guṇīkṛta* is used in just the same way, but in the epic this word is, I think, used only in *dviguṇīkṛtucikramatḥ* (*Great Epic*, p. 419). In the same way, *guṇībhūta* is used in later texts for *guṇita*, multiplied, but in the epic it means inferior (compare *gāuṇa*), *guṇībhūta guṇāḥ sarve tiṣṭhanti hi parākrantau*, "all qualities are qualified in (inferior to) valor," ii. 16. 11. But usually no verb is needed to express multiplication, which as a formal arithmetical process the epic has as little occasion to make use of as subtraction. But the informal multiplication of ordinary language, double, thrice, a hundred-fold, without formal sums, is as common as in any other language, and the times thus indicated is regularly expressed either by simple juxtaposition of numbers, whereby, as has already been said, one is uncertain whether addition or multiplication is intended, as in *pañcagataḥ*, one hundred and five or five hundred, iv. 43. 6 (only the syntax sometimes shows decidedly, *narānām pañcapañcāśa eṣa pattir vidhīyate*, "a *patti* is reckoned as five [and] fifty men," v. 155. 28); or by the noun *guṇa*, as in *ṣaṭcīrā dviguṇaśrotraḥ*, "having six heads and double as many ears," iii. 225. 17; *ekāikaṁ triguṇāḥ śarāḥ*, "each one (he wounded) with three times the number of arrows" (each had used), viii. 48. 70; *tataḥ ṣaṭtiguṇaḥ kāle*, "in a time sixty times longer than that," xiii. 28. 10. In this last case the same idea is expressed in the following stanzas without *guṇa*, but perhaps only because this word has been used several times already. Thus in 11, *tataḥ tu dvigato kāle labhate kāṇḍapṛsthātām*, "in a time two hundred (times longer) than that." As an adverb: *tataḥ śatagūṇaṁ duḥkham idam mām asprṣat bhṛgam*, "this grief has afflicted me sorely, a hundred times worse than that."

xi. 27. 33. In this use *gūṇa* has ousted almost completely the old *vrt* of *triṣṭ*, which survives only in a few hereditary turns. A very uncommon equivalent is *sanikhyā*, as in xv. 3. 63, *yasya nāgasahasreṇa śatasānikhyeṇa vāi balam*, "whose strength is comparable with a thousand elephants' a hundred times over" (numbered a hundred). Between the qualitative and temporal meaning, where the word is equivalent to *kṛtvā*, "times," lies the application found in ii. 24. 6, where, in a wrestling-match, one is whirled about a hundred times, *śatagūṇam*, a description, by the way, copied in many details by the writer of iv. 13, where śl. 36, for example, has the same expression. Here *drigūṇam* occurs in a physical sense also, *rakṣo drigūṇam cakre*, "he doubled that demon up," i. 163. 27 and elsewhere.

A combination of adding and multiplying, as in "more than so many times that" is expressed by the *gūṇated* numeral (to use this word thus) plus the word for "more." Thus, "he gave them wealth more than five times what they had asked him for" is *prādāc ca dvaiṣam . . . yatho 'ktvāntas te tasminś tatoh pañcagūṇādhiṣam*, ii. 12. 15. Without "more": *yatho 'pūṣṭam ācāryāḥ kāryaḥ pañcagūṇo rathaḥ*, "let my chariot be furnished with five times (as many arrows) as the teachers enjoin," vii. 112. 48; *yathā veda dvigūṇam vatsi*, "you know twice as much as he knows," viii. 32. 62. Here partial correlation takes the place of the comparative (ablative) idea. The more elaborate construction is also common, as in xiii. 100. 7: *yathā ca gṛhiṇas toṣaḥ . . . tathā śatagūṇā prātir devatānām*, "a hundredfold so great is the joy of the divinities as is the satisfaction of the householder."

Sometimes, when the completion of the clause is easily understood, it is left out entirely, and we find (of the *ahina* sacrifice) *dakṣiṇām trigūṇām kuru*, *trītram vṛjatu*, "make the fee threefold, let it reach treble," xiv. 88. 14, that is, make it three times more (than ordinary).

Some curiously awkward methods of multiplying are found. In i. 55. 2, after saying that Indra's sacrifices are a hundred in

¹ So in using the ablative it is not necessary, any more than in Greek, to be precise in the application of the case following "times that;" *acvamedhād daśagūṇam phalam āhuḥ*, "they say the fruit is ten-fold (that of) a horse-sacrifice," iii. 82. 27.

number, *saṅkhyā*, the poet adds: "But your sacrifice here, O Bhārata, is *tathā parāṇi tulyasaṅkhyāṇi gatāni vāi*," which the scholiast explains as equal to an *ayuta* of Śakra's (100×100), but perhaps only another hundred is intended. In xiv. 65. 18, however, there is no escaping the awkwardness with which one number is multiplied into another of a separate category. What the poet wants to say is sixty thousand camels and twice as many hundred horses, which he expresses by "twice as many horses hundreds," *ṣaṣṭir uśtrasahasraṇi gatāni dvigupā hyaḡāḥ*. This is followed by *tāvad eva* with the plural noun, *gataṇi rathāḥ cāi 'va tāvad eva kareṇavaḥ*, that is, "just as much" instead of "as many." So in iii. 281. 10-12, "fourteen erores of Piṣācas, twice as much of Rakṣasas, *dvitāvat* (with genitive and with *koṭyaḥ* supplied), and three times as many Yakṣas," *tataḥ triṇipā yaksāḥ*. Similarly, *yāvat tasya bhavet puṣṭis tejo* (etc.), *Kṛṣṇe tattriṇipāṇam*, "however much may be Arjuna's prosperity, glory, etc., Kṛṣṇa's is three times that," xiii. 148. 34. Ordinarily the numeral adjectives agree with the nouns compared, as in iii. 122. 27, *yāvantaḥ pāvakāḥ proktāḥ somāḥ tāvanta eva tu*; vii. 201, 59, *ṣaṣṭiṁ varṣasahasraṇi tāvanti eva gatāni ca*. A connecting link is furnished by *tāvat* as part of a compound *yāvanti tasyā romāṇi tāvad yugasahasraṇi*, iii. 200. 71, etc.

Another case of comparing numerically different sorts of things is found in vii. 65. 9, but here the number is the same: *vārksāḥ ca yūpā yāvantaḥ . . . te tathāi 'va punaḥ cāi 'nye tāvantaḥ kāñcana bhavan*.

Distribution is expressed by repetition, with or without an adverb: *navame navame 'hani . . . daśāhe vāi gate gate*, "each ninth day . . . as often as the tenth day passed," xiii. 107. 39, 43; *trayāṇām mātṛaṇām sarvām ekāikasya prthak prthak*, "each one separately has two of the three," xiv. 18. 27. This relieves one of the necessity of distinguishing between each and all; for example, in xiv. 90. 34, *kuḍavaṁ kuḍavaṁ sarve vyabhajanta*, "they all divided (so that each obtained) one *kuḍava*," iii. 124. 21, *cataśca cāi 'yatā daśstrā yojanānām gatāni gatam*, "four fangs extending a hundred leagues each." But *ekāika* is usually expressed, as above and in ii. 52. 21, *datvāi 'kāiko daśaśatān kuñjarān*, "each giving ten hundred elephants." The noun used alone may be singular, *jātaṁ jātaṁ*

ca sū putrān kṣipaty ambhasi, "she throws in the water (each) son when born," or plural, *jātān jātān prakṣipā 'smān (putrān)*, i. 98. 13 and 99. 43. The verb may agree with the singular: *ekāikaḥ te tadā pāgāh kramagāh pavinokṣyate*, xii. 227. 116, perhaps only metrical, as in the same chapter *gocīmī for gocāmi*, çl. 88. The late derivative *ekāikagya* is found in xii. 326. 38, *tad antahpurakānanam surāṅgatū darçagām āsur ekāika-gya* (here the grove opens out from the third *kukṣyā* of the palace).

With adjectives the cardinal stem prefixed multiplies the adjective, *caturbhadrataras' trayā*, "four times as happy (compared) with you," in vii. 55. 49. and xii. 29. 30, two scenes where all the "kings that died" are spoken of at length in two different but related accounts, of some value for the history of the epic.¹ In vii. 70. 25, the phrase is intensified: *caturbhadratarās trayā bhadraçatādhikāh*.

Finally, there is the multiplication expressed by *dhā* as an ending, which gives not only the times of division and consequent multiplication of parts, and time literally, *ekadhā*, "at one time," but also the multiple times in numbers, *saptadhā*, "seven times (over)." *Sapta tridhā* is thus equivalent to *sapta trigunāni*. In xii. 223. 22, the Gandharvas dance *ṣaṭ sahasrāni*

¹ The instrumental is not so very rare. Compare *eko hi bahubhiḥ greyān*, "one (sage) better than many" (fools), iii. 99. 22; *ko nu svantataro mayā*, ix. 64. 21; *sā 'gā kṛçatari mayā*, xii. 128. 14; *durmarṣanataras tvayā*, xii. 227. 81. The ablative is used after a positive, *mama balam bhīmaḥ vāyor api*, "my strength is greater than the wind," xii. 155. 6. One case expresses comparison, the other the distance from, *sukhāt sukhatarām prāptah*, "coming from joy to more joy," xiii. 119. 11. The ablative is found with only an implied comparison, *rājyād devatvam icchanti*, "they wish godship from kingship," xii. 180. 20, leading to preference (*vr̥j* and abl.; also *greyān dāho na bhakṣaṇam*, i. 230. 21, etc.; Holtzmann, § 293 b). Noticeable is the double ablative showing clearly the construction's origin, *svavīryād rājavīryāc ca sva, vīryam balavattaram*, "from (of) his own and a king's, his own power is stronger," xii. 165. 18. Holtzmann, at § 281, gives a few more examples of the instrumental. To the gen. comparat., my *Great Epic*, p. 473, add *maraṇaṭ cōbhanāṭ (=varam) tasya*, i. 79. 13.

² The introduction of the former is in the latter put at the end of the account and the latter omits the second Rāma, which completes the list of sixteen in Droṇa. Bharata, too, changes places, being the ante-penultimate king in Çānti but the fifth in Droṇa, which has several later features.

saptadhā, literally in seven groups of six thousands, or seven times six thousand, that is, a not unusual amplification by a sacred multiple of an old group, for the Atharva Veda, xi. 5. 2, gives the same conventional *ṣaṭsahasrāḥ*, though here three hundred thirty-three are added. The epic itself gives to the Gandharvas another conventional number at iii. 139. 6, where they are eighty-eight thousand in number and the Yakṣas are four times as many, *astāṣṭisahasrāpi Gandharvāḥ . . . Yakṣaḥ cāi 'nā caturguṇāḥ*. Another example is furnished by the list of Munis in seven groups of seven each, at xiii. 151. 42: *ity ete munayo diryā ekāikaḥ sapta saptadhā*, etc., "seven, one by one, reckoned sevenfold" (a different account in xiii. 166. 37 ff.). Compare also *saptadhā sapta saptaśu*; *janna saptadhā*, xiv. 20. 23 and 27. The number of times a multiplied god appears is often expressed thus, as when Rudra, kind and terrible, one-eyed and three-eyed, appears as *ekadhā*, *dvidhā*, *bahudhā*, *gatadhā*, *sahasradhā*, *ṣaṭsahasradhā*, xiii. 161. 43. One of his forms, by the way, is *dhāmra*, which gives, it is said, his name of *dhūryaṣṭi(n)*, a title found only here, xiii. 162. 9, and vii. 202. 129, two passages of the same period and content, a late epic "Çatanudriya."

DIVISION.

Halving is expressed by *dvāidhībhā* or *-kar* or *dvidhākar*; other divisions by *trīdhā* (*trāidham*), *caturdhā*, and so on, with *kar* or *vibhaj*, e. g., *daṣadhā karyam geṣam*, "the remainder is to be divided tenfold;" *dvidhā kṛtā jihvāḥ*, ("therefore the snakes") tongues were cloven," i. 34. 23 (*dvijihvāḥ ca kṛtāḥ*, 24); *gavāṃ dvāidhīkṛtāḥ kharāḥ*, *kharān dvidhā 'karot*, "Rudra clove the hoofs of his bull and other cattle," viii. 34. 105. The half, *ardha*, is used no more with nouns than with participles: *ardhāsanaṃ labdhavān*, "he got half of Indra's throne," iii. 126. 38; *ardhaecyutāsamāḥ*, "half flung from their seat," vii. 196. 15; also of course with other numbers. With words of time, *ardha* follows or precedes in *māsā-rātra*, *ardhamāsa*, and means either the middle (of day or night, *ardhadivasa*, *-rātra*) or half: *ardharātrasamayā*, "at midnight" (so *passim*); *yady ardhadivasaṃ yudhyate*, "if he fights half a day," vii. 190. 46 (*ardhadivasaṃ gatrā*, "going half a day," R. vii. 46. 24).

Besides *ardhamāsa*, "a month and a half" may of course be expressed in full. Thus, where *mā* is used exactly as in *mā cīram*, in iv. 21. 17, *mā dīrgham kṣama kālān tram māsam ardham va sammatam*, "have patience for a short time, a month and a half" (= *sārdha*).

The use of *ardha* with other numbers shows that, as in the case of two numbers joined and indicating that the former influences the latter without specifying how (e. g. *daśagata*=110 or 1000), the prefixed *ardha* modifies the word with which it is connected, but does not specify whether by addition or subtraction or multiplication. So *ardhagatam* is one hundred modified by one half, just as *ekaśatam* is one hundred modified by one, and the hearer is left to determine whether this means half a hundred or one hundred plus a half (hundred). With other fractions, however, there is understood a conventional modification of subtraction. Thus "half-fourth" is always (as adjective) three and a half, that is four as modified by a half. For example, up to two and a half *koss* is "to the half-third *koss*," i. e. to the third *koss* as modified by a half, *kroṣād ardhatrītiḡāt*.¹

When not defined, *bhāga* and *aṅga*, "part," mean a quarter, *caturbhāga*=*pāda*, a (fourth) part (of a quadruped). For three quarters is used either "three quarter parts" or "three parts." The usual meaning of "three-part," *tribhāga*, is one third, but it occurs also in the later epic (as in still later literature) in the meaning of three quarters. For other divisions, the part is made explicit, *aṣṭibhāga*, $\frac{1}{8}$, etc. Only *kalā* is almost always $\frac{1}{6}$.

iii. 190. 10, (*krte catuspād dharmaḥ*) *adharmanapādaividhas tu tribhir aṅgāḥ pratisthītaḥ*;

ib. 11 and 12, *tribhir aṅgāḥ, caturthāṅgena*.

In the pseudo-epic, the same situation is expressed by *pādon dharmaḥ* (in Tretā), *dvipādu*, *pāda* (*adhare yuge*), to which is added the unique idea that even this quarter in Kali is so diminished as to leave one sixty-fourth, *bhavaḥ kālaviṣeṣeṇa kalā dharmasya soḍaśī*, xii. 268. 33-34 (*caturthāṅga* also xii. 283. 51).

¹ The passage is cited in full on p. 147, below. I fail to understand Speyer's explanation, *S. Syntax*, § 301, that *ardhatrītiya* in such a case means "having the third being [but] half."

ii. 68. 78, *ardham harati vā gresṭhaḥ pādo bhavati kartṛṣu*.
iv. 52. 17, *halacaturbhāga*, "one fourth the army."

xii. 24. 12, *ādāya baṭiṣāḍbhāgaṁ yo rāstram nā 'bhirakṣati
pratigṛhṇāti tatpāpam caturāṅgena bhūmipatē*.

ii. 5. 70,

*kaccid āgasya vā 'rdhena caturbhāgena vā pṇuḥ
pādabhāgāis tribhīr vā 'pi vyayuh saṁgrādhyate tura*,
"are your expenses covered by a half or a quarter, or
at any rate by three quarters of your income?"

vii. 186. 1,

tribhāgamātrageṣūpām rātryām yudham avartata,
"the battle was renewed when one third the night was
left."

vii. 191. 9,

tasya cā 'hinas tribhāgena kṣyam juṣmḥ patattriṇaḥ,
"in the course of one third of that day."

The "third" may of course be expressed, as in xii. 285. 23,
labheta bhāgam . . . ardham tathā bhāgam atho tṛtīyam. In xiii.
168. 28, *tribhāgeṣa* means "having three quarters left."

In i. 96. 21 (as *ardhārdha* still later means a fourth) one
eighth is expressed by "half a fourth," *turīyārdham pralīś-
yāmo vīryasyāi 'kāikaḥ vṛyam*, "we shall severally give a half
of the fourth of our power," said by the eight Vasus. It is
rather remarkable that Kṛṣṇa is described in xii. 281. 62 as this
fraction of God: *mūlathāyī mahādevaḥ . . . tatsthaḥ sṛjati tām
bhāvaṁ . . . turīyārdhena tasya 'mam vidhmi Kṛṣṇam*.

When quarters are mentioned, as when Çrī is quartered,
caturdhā vibhaktā, and the quarters are enumerated, the first is
pāda alone, the others are *dvitīya*, *tṛtīya*, *caturtha*, *pādas*, xiii.
225. 19 ff.

According to the commentator, *triguṇa*, threefold, like *tri-
bhāga*, also means one third in v. 55. 66, where, after eleven
armies have been contrasted with the seven which in comparison
are called *nyānāḥ*, "deficient," the deficiency is declared to be
great enough to warrant a battle, for

*balam triguṇāto hinam yodhyam prāha Bṛhaspatih
parebhyas triguṇā ce 'yam mama rājann avīkinī*,

whereto N. remarks that the adverb means (deficient) by a
third, *tryaṅgena*, and the adjective "a third more." And cer-

tainly if number is implied at all, eleven are not thrice seven but may be loosely reckoned as a group of three fours, deducting one of which would leave seven, so the "deficient" host would be "a third less" and the host of eleven would be "a third more" (measured by itself). There seems, however, to be a conscious play on words here, for in the next stanza the "deficiency," *nyānatā*, is explained as *gṛahīnam* or a moral lack.

In vituperation, which exercises the epic poets a good deal, it is customary to say that an opponent is not worth a half, a quarter, or a sixteenth of the other man. In praise, on the other hand, one says that the object of praise is worth one and a half of the other. One sixteenth, expressed either as "sixteenth particle" or simply a particle or a particle-part, denotes the smallest part usually taken into account. The word gives the last imperishable fraction of the moon visible before it disappears (xii. 305. 4, so the pure soul, *kalā sūkṣmā*, ib. 6 and 335. 40). The adjectival full is sometimes added to the part. Twice this fraction is exceeded, once by saying that one eighteenth will not express the relation of inferiority, once by descending to one hundredth part to express contempt. Apart from vituperation, the "sixteenth particle" is employed in a few old phrases. It is found also in Manu and in Buddhistic literature. Examples:

- i. 100. 68, *agnikotrāṇi trayi vidyā santānam api cā 'kṣayam*
sarvāṇy etāny apatyasya kalām nā 'rhanti śoḍaśīm.
- ii. 41. 27, *iṣṭam dattam adhātum ca yujñāś ca bakudakṣiṇāḥ*
sarvam etad apatyasya kalām nā 'rhanti śoḍaśīm.
- iii. 91. 23, *na sa Pārthasya saṁgrāme kalām arhati śoḍaśīm.*

So iii. 174. 3; 254. 27; 257. 4 (your sacrifice is inferior); vii. 36. 7 (the army); vii. 111. 30¹. With *pūrṇa*: iv. 39. 14, *na cā 'rjunaḥ kalā pūrṇā² mama*, "Arjuna is not (as much as) one whole (sixteenth) part of me;" v. 49. 34, *nā 'yam kalā 'pi sam-pūrṇā Pāṇḍavānām*, "he is not even one whole (sixteenth) particle of the Pandus." So in vii. 197. 17,

yah kalām śoḍaśīm pūrṇām Dhananjaya na te 'rhati.

¹ In the next stanza, *nā 'lam Pārthasya saṁyuge* (rare genitive), "not equal to."

² So I read (compare the next citation). PW. accepts the text, *kalā-pūrṇo*, s. v.

In viii. 15. 28 it is said, "all weapons are not worth a sixteenth part of him." As an equivalent of $\frac{1}{16}$, *prastha* ($\frac{1}{16}$ of a measure) is used where it is appropriate, xiv. 90. 7, "this sacrifice is not equal to a *prastha* of grain of (given by) a man living by glean-ing corn," *saktuprasthena na tulyah*.

In religious writing, besides the phrase above is found a (Buddhistic) comparison, repeated, xii. 174. 46; 177. 51; 277. 6:

*yac ca kāmutsakkharāṇi loke yac ca diriyam mahat sukham
trāṣṭvākṣayasukhasyāpi 'te nā 'rhatuḥ śubhāṇi kulāṃ.*

This stanza is in fact attributed to the same Buddhistic king who sings of his happiness in having nothing, and it is associated with that famous stanza in the last two passages. In the same way is used *kulā* alone:

*agamedhasahasrasya vājapeyagatasya ca
yogasya kalayā tāta na tulyaṇi vidyate phalam,
xii. 324. 9 (a Yoga improvement of Spruch 791).*

I have found the "sixteenth" phrase but once in a triṣṭubh stanza, with a slight alteration in form and sense (truth sur-passes all possessions):

iii. 34. 22, *vājyaṇi ca patrāḥ ca yuṣo dhanāni ca
sarvāṇi na satyasya kulāṃ upātī.*

A curious account of the distribution of the world's wealth in vi. 6. 23 asserts that Kuhera has one quarter of the valuables of Mern, out of which he dispenses one particle-part to mankind, equivalent to one sixty-fourth of all, as in the case of Kali's virtue (above):

*tasmāt kubero bhagavaṅś caturtham bhūyam agnute
tataḥ kalāṇyaṇi vīttasya manasyebhyaḥ prayacchati.*

Examples of other fractions in seorn: i. 201. 13, (*yuddhe*) *Rādheyasya na pādabhāk*, "not worth a quarter of him;" iii. 253. 9, *na cā 'pi pādabhāk Karmah Pāṇḍurvānām (dhanurede)*; vii. 76. 1, *teṣāṃ vīryam mamā 'rdhena na tulyam*, "their power is not equal to half of me;" xii. 155. 6, *kalāṃ usṭādaḥ* ¹*prāṇāir na me prāpnoti mārutaḥ*; x. 12. 17, *na samā mama vīryasya śatāṅgeṇā 'pi piṇḍitāḥ*, "they all together are not equal to one hundredth part of my power."

¹ This $\frac{1}{16}$ for the older $\frac{1}{16}$ is a pseudo-epic alteration of the old phrase. It occurs in the Wind and Çālmali fable.

A back-handed boast of Karpā, which, I think, the poet intentionally makes incoherent, is that of viii. 43. 9, *ṛte śalya-sahasreṇa vijayeyam aham purāṇ*, "I could conquer the enemy without (the help of) a thousand śalyas," i. e., "I am equal to a thousand śalyas," or rather "without ś., a thousand times over." śalya mockingly replies that Karpā talks nonsense; whereupon Karpā returns "more and double abuse," *parasāṃ drigṇam bhāṣaḥ*.

On the other hand, in lauding a friend, one and a half is the norm of comparison, as in the following examples:

vii. 72. 34, *mayā 'dhyardhagṇaḥ (putraḥ)*, "my son is equal to me one and a half times over" (sometimes simply "equal to me").

xi. 20. 1, *adhyardhagṇam āhur yaṃ bale . . . pitrā tvayā ca*, "who in power they say is equal to one and a half times his father and you" (Kṛṣṇa!). But the comparison, too, is once used scornfully:

ix. 33. 19, *adhyardhena guṇeṇ 'gūṇaḥ yadā gurutarī mama na tathā Dhārtarāṣṭraya*, "this club of mine is one and a half times heavier than that of D."

Apart from this belligerent use, one and a half is used of measurement of numbers, i. 1. 103, *adhyardhagata*, "having one hundred and fifty;" of land, viii. 88. 10, *adhyardhamātre dhanuṣāṃ sahasre*, "on (land) measuring one and a half thousand bow-lengths;" v. 8. 2, *tasya senānivego 'bhūd adhyardham iva yojanam*, "his camp was about a league and a half."

In reckoning interest, *pādikam śatam* is twenty-five per cent., but the verse in which this occurs, ii. 5. 78, *pādikam ca catam vṛddhyā dadūsy ṣṭam anugraham*, has a varied reading, *praty ekam ca śatam* (metrical for *prati śatam ca ekam*).¹

As observed above, the current words for fraction are *pāda*, *bhāga*, and *aṅga*. In xiii. 26. 97, appears in this sense *ekadeśa*, a single part of a whole: *udāhṛtaḥ sarvathā te guṇānām mayāi 'kadeśaḥ . . . śaktir na me . . . guṇān sarvāṃ parimāṭum*, "a single part of (Ganges') virtues I have told thee, I cannot count them all."

¹ The later epic, by the way, has two coins not previously recognized, besides the Roman denarius (implied), namely, the *kāṁṇi* and *aṣṭāpa-dapada* (a gold *kārṣāpaṇa*), xii. 294. 16; 299. 40.

DIMENSIONS, TERMS, VALUES, SYNTACTICAL CONSTRUCTION.

The usual dimension, *parimāṇa*, mentioned in the epic is length, and with few exceptions distance (length) or height is the *pramāṇa*, a general word for size and extent. Certain measurements are made in the case of the few small things measured, but short distances are loosely cast in such forms as "near by," "not far," "within sight," or "within hearing," and indefinite smallness of extent in the same natural manner is described as "not an atom," "nor a bit," etc.

Distance: *teṣāṃ saṃśrutarape*, "within hearing of them," xv. 18. 21 (ib. 20, *acidārataḥ*, "not far off," like *saṃjṇataḥ*, "near," with genitive; also with ablative, *nā 'tīdāreṇa naya-rāṇ vanāt nāmāt dhi lakṣaye*, i. 151. 44; *avidāre vanāt*, 152. 1; *na dāraṇ vanāt*, 154. 35; *abhyāḡe*, 156. 10, "in the neighborhood"); *āgratam prati, utsasarja garbhāṇa*, i. 8. 7, "near the asylum"; also *antikaṃ* and *antike*, according to the verb. In the case of *sakāḡa*, "with(in) sight," proximity, the original sense in many cases has well-nigh disappeared, *mātāḥ sakāḡāt taṃ ḡāpaṇ ḡrutevā*, "hearing of the curse on the part of his mother," i. 37. 1.

The Rāmāyana has another, more modern, phrase to indicate proximity, namely *mūla*, as in *ahutā gamiṣyāṇi Yamasya mūlam*, v. 28. 17; *nauma mūlam*, ii. 64. 49, which belongs rather to Purāṇic than to epic diction.

Extent: *na tasyāḥ sākṣmam api*, "no (superficial) atom of her," i. 211. 16; *na tasya kāye antaram*, "no space on his body," iii. 21. 7; *hayanāṇ nā 'ntaram*, "no interval between the horses," iii. 172. 6; *chidraṇ na rathayor*, "no chink between the two chariots," i. 226. 3. Indeterminate size is given by compounds, much as in English, *gaḡjā acalasaṇḡkāḡāḥ*, "mountain-size elephants," xv. 23. 9, etc.

The verb extend, *āyam*, is used of extending a circle, synonyms with *utsarj*, *maṇḡalam utsrjya*, v. 195. 15. The circumference is *parimāḡa*, the diameter, *viṣkambha*. To express the idea of equal distance from a center, the term usually employed is *samanta*, "on every side," in adverbial form, *vedī samantāt pañcayojanā*, "five leagues on every side," iii. 129. 22. Generally, the geometrical figures implied by battle-arrays, called *vyāhas*, are described in figurative language, as a bird, a

needle, a dolphin, and the troops are stationed on the beak, tail, and wings. Thus *karna*, ear, becomes "corner" in vi. 60. 10, *caturcaturegālasahasrakarṇaḥ*, "(an array) with four thousand elephants on each corner" (X. *karṇeṣu vidighbhāgeṣu*). But there is a peculiarity here in that no figure has been mentioned, and according to the account this array should be like a former one of crescent shape with two horns, *grāye*, but, not to speak of the plural, we cannot take this statement too literally, and I do not know that *karna* is even corn.

A *grāyātaka*, named from a triangular unit which has "horns," is used to describe one of these *vyāhas* in vi. 87. 17, and may be a triangle, though here also the scholiast gives the usual epic meaning "shaped like a four-road place," just as at iv. 68. 25, *caturpatha*, etc. A triangle is *trikona*, *τρίγωνος*, (*trigūṇa*), of the *garuḍa*, late, as explained in my *Great Epic*, p. 372. A city square is a "four place," *caturara*, xii. 69. 52, squares and markets being mentioned together in descriptions of cities. In xii. 73. 21, in antithesis to the whole, *kytsna*, city, this word may mean as in English a town-quarter; but in xii. 86. 8, *caturāpanagobhita* is simply "beautified by squares and markets." The "four" of a square is used also to give the idea of a four-square house, *caturgāla*, and *anta*, boundary, is also used to imply a square, as in *dayakiṣkusahasrāntā*, of a hall, "ten thousand cubits square," a meaning made clear by a parallel passage, where *samantāt*, "on all sides," is expressly added, ii. 1. 21; 3. 23, and no circle can be intended. Earth, *catur-antā*, "has four boundaries," that is, it is bounded by the "four seas." In xiv. 64. 10, a camp is *ṣaṭpada* or *ṣaṭpatha* (and *navasaṁkhyāna* or *saṁsthāna*), with three streets running north and south and three east and west, according to the scholiast; but in xv. 5. 16 he explains *ṣaṭpadam puram* as having six (traversable) places within the seven walls (up to the inner city), which is not a likely meaning, since the word is followed by *sarvatodiṣam*, "in all directions." Octagonal is *aṣṭā-gri* and other numerals are used with the same word, but only of edges, eight-edged posts and clubs.

Land is measured by bow-lengths (above), and by cow-hides, *api gocarmamātrena bhāmidānena pāyate*, "purified by giving even a cow-hide measure of land," xiii. 62. 19; and the length of a cord is measured in the same way, *na tāni vadhri paripahee*

gatacarmā, "a cord of a hundred hides could not encircle it," i. 30. 23. A "span of land" and "as much land as a needle's point could cover" are contemptuous terms.

From these general methods of measurement I turn to the more exact specifications found in the epic, arranging them on an ascending scale of comparison, from the "smallest finger" to the indefinite *yajana*, which is best rendered league, because its length varies like that of a league, while it approximates most closely to the three-mile league, though it ranges from that extent to about ten miles, according to later authorities; but nothing in the epic determines its length.

Finger-measurement: A thumb-joint serves as the measure of a small bit in general, *aṅguṣṭhaparcamātrā garbhāḥ*, i. 115. 20, and "thumbkin" spirits are perhaps conceived as being of thumb-size in relation to breadth as well as height. God himself, as a spirit, is measured by the size of a thumb-joint, *hṛdayaṁ sarvabhūtānāṁ parvapāṇā 'ṅguṣṭhamātrakāḥ*, xii. 313. 15; as all spirits are described as *aṅguṣṭhamātra*, thumb-size.¹ All shortest measured distances are calculated by this norm, usually by twos and fours, the application showing, however, that "two thumbs" and "four thumbs" refer to thumb-breadths. Thus there is a stereotyped battle-phrase, *na tasyā 'śūl antir-bhinnam gātre deyaṅgulam antaram*, "there was not an unwounded space of two thumbs on his limb," vi. 119. 86; 175. 54; iv. 55. 5 (v. l.); xii. 77. 27. The same phrase is found in R. vi. 45. 20, with the verb of the Virāṭa passage but with only one "thumb": *na hy aviddhaṁ tasya gātre babhūvā 'ṅgulam antaram*, perhaps to be corrected as in Mbh. Earth is flung up "four thumbs," *caturaṅgulam*, by a chariot, viii. 90. 106. In a late scene, Yudhiṣṭhira's chariot floats four thumbs from the earth, *prthivyāḥ caturaṅgulam ucchritaḥ*, vii. 190. 56.

The "littlest finger" serves as a comparison in the description of xii. 127. 7-8 (Tauṁ):

*anyāir narair mahābāho vapuṣā 'ṣṭaḡuṇānvitam . . .
garīram api rājendra tasya kṛṣṇasthikāsamam,*

"eight times in shape compared with other men (i. e. eight times as tall),² the body being (slender) as the littlest finger";

¹ References in my *Great Epic*, p. 32.

² A man's height is often given by saying how many cubits he has (as below). For tall and short are used *prāṇḍu* and *hrasva*, respectively,

where the poet has to change the regular form of the word *kan-iṣṭhikā* on account of the meter. I do not know whether in i. 52. 7, snakes that are the size of a *gokarna*, in antithesis to those that are leagues long, *gokarnasga pramāṇatāḥ*, *kroṣaḥ* *yojanamūtrāḥ*, are imagined to be the length of a *gokarna*-arrow or of a thumb-and-finger-span, a late meaning of the word. When subsequently re-described, they are *yojanāyāmaristarā* (also a Rāmāyaṇa phrase) *deigajanatasamāyatāḥ*, i. 57. 23, that is, measured by leagues only.

Hand and span: The triangular altar referred to above is described as "of eighteen hands," *aṣṭādaśakarātmaśaḥ*, xiv. 88. 32. The hand, however, is usually reckoned as a two-span cubit and not as a hand-length. Probably the "hand-tip" gives a double-span, for in the description of a slender woman it is said that her waist measures "a hand-tip," *karāgrasammitam madhyam*, iv. 13. 22. So in xi. 18. 5, *anavadyāṅgī kara-sammitamadhyamā*, "of irreproachable form, measuring a 'hand' about the waist." This measurement shows that the *kara* is equivalent to the *hasta*, a synonymous term, and equal to about a cubit (eighteen inches nominally, but perhaps only about sixteen), "eighteen inches round the waist" being (as I am informed) the boast of slender maids to-day, and Hindu women being petite. Double this length, two *hastas*, is given in Hindu tables as the circumference of a man's body, about the average thirty-four to thirty-six-inch waist.

The span, *prādega*, is used of the measure of the breast about the spirit: *prādegamātre hydi niḥsṛtaṁ yat*, "what is made manifest in the span-measured breast," xii. 246. 28, that is, in the vital circle, measured as twelve thumbs in extent from the center; a late view if this reading be accepted.¹ Elsewhere the *prādega* is mentioned a few times in the epic, but never in such a way as to betray what is meant. It measures, for example, the difference in height between the Pāṇḍus and other men, and

jajñe cālaguruḥ prāñcur mahimnā prathitāḥ prabhuḥ, ix. 51. 34; the fever horn of Īva's sweat is a *hrasvo 'timātram* ("excessively short") devil, xii. 284. 40.

¹ Reading *prādegamātram* we should have a reflex of Chānd. v. 18. 1; Māitri, vi. 88. The Āditya Purāṇa, cited by Colebrooke, *Essays*, vol. i. p. 539, says that Vyāsa makes the *prādega* only one thumb-breadth, and not ten or twelve, as taught by others.

between Bhīṣma and Arjuna, for "Bhīṣma in size was more by a span than Arjuna," *pramāṇato Bhīṣmasenaḥ prādeyenā 'dhiko 'rjunāt*, v. 51. 19, and (the same expression except for the instrumental case) in v. 169. 8, the Paṇḍus are a span taller than all others, *prādeyenā 'dhikāḥ pumbhir anyāis te ca pramāṇataḥ*.

Another word for span is *vitasti*, whence the arrows "called span-long," *vāitastikā nāma*, used only by special warriors at short distances in the descriptions of the late seventh book and nowhere else till they are met with again in the Harivaṅṣa and in the later Rāmāyaṇa. Thus in vii. 191. 42 and in R. vi. 49. 49 of the Gorresio edition, but not in the Bombay text. This is one of the many little indications that show how close Droṇa stands to the latest additions made to the epic. On the other hand, it helps to a terminus ad quem to find that *hasta* is never used for a measure in the epic, though common in the Purāṇas, and reckoned as two *vitastis* or twenty-four thumb-breadths.

Cubits: The cubits mentioned are *kiṣku*, in vii. 134. 10, "a club of four cubits," and *aratni*, in i. 167. 25, "a bow (of Droṇa) of six cubits" (*catuṣkiṣku* and *ṣaḍaratnīdhanuḥ*, respectively, as possessive and determinative compounds). Post-epical authorities (cited by Colebrooke) make the *aratni* equal to twenty-one thumb-breadths, and two *aratnis* are one *kiṣku*; though some reckon a *kiṣku* as equal to four cubits. In vii. 175. 19, both these names, as if synonymous, are united in the description of a demon's bow, "a twelve-cubit-bow a cubit round," *vyaktani kiṣkuparipāham dvādaṣaratnīkārmukam*. Arjuna's bow, i. 189. 20; v. 160. 108, is as long as himself, *tāla-mātra*, "palm-tree tall," a common though indefinite measure, which according to i. 197. 39 is the height of all the Paṇḍus. The five-cubit (*kiṣku*) bow of x. 18. 6 is allegorical but may indicate the usual length. Arrows are "axle-long," *akṣamātra*, passim, and the *añjalika* arrow mentioned in viii. 91. 41 is three cubits, *tryaratni*. A later form, *ratni*, is used in this same book. Here, viii. 72. 30, it is said that Karna was *aṣṭaratnīḥ*, "eight cubits" tall (in iii. 126. 32 a man "grew thirteen cubits," *avaradhuta kiṣkām trayodaṣa*, but he was Māṇdhātara, and enjoyed peculiar nursing). We might almost suppose that this so-called cubit, whether *kiṣku* or *aratni*, was really a foot, or about twelve inches instead of eighteen. For the actual length of

Hindu bows and arrows are for the ordinary bow five feet and for the ordinary arrow two and a half to three feet (*Ruling Caste*, pp. 270, 276), and both five and six "cubits" are the size of the epic bows, while the one arrow measured is given as three cubits, the heroes being a little above but not much over the normal height and only Karna being of eight *ratnis*. Even he is not extolled as a giant, as a man of eight cubits would be. "Palm-tree tall" and another phrase used of the heroes, *gāṭastambhā ivo 'dhatāḥ*, "lofty as Gāṭ trees," v. 169. 7, are more grandiose than exact. As the later schemes reckon the cubits in thumbs (or fingers), the twenty-one and twenty-four thumbs that go, respectively, to an *aratni* and *hasta* must be estimated by the size of a Hindu hand, which at present is rather small. Further, the relation between thumb-joints and span, reckoned as from the end of the thumb to the outstretched fore-finger, is given as twelve, which is too many, for the distance corresponds rather to the relation between the span and the finger-breadth. Reckoned as eight inches, a normal span, the later cubit would be nearer sixteen than eighteen inches and the *ratni*, being still shorter, would not be much over a foot. According to the Sūgruta, a man's height is one hundred and twenty thumbs, i. 126. 11, or ten spans, which at nine inches to a span would make the average Hindu seven and a half feet tall and at seven inches would still make him nearly six feet.

Foot and Pace: The measure by foot-pace is almost confined to a conventional "eight paces," *padāni*, often used in battle-scenes, but always, if I am not mistaken, in the same way, *āplutya*, or *abhyetya*, *padāny aṣṭāu*, as in vii. 15. 28; ix. 12. 20. Even a deer "went eight paces and then turned," *tataḥ sa hariṇo gatvā padāny aṣṭāu nyavartata*, xii. 273. 14. According to the Mārkanḍeya Purāṇa, cited by Colebrook, *Essays*, vol. i., p. 539, a *pada* is a foot-breadth and not a pace, being only half a *vitasti* span or six fingers (thumbs). In the epic, as in "seven paces" in the marriage-rite, and in the colloquial phrase *pade pade*, "step by step," the word means a general pace-length or step. "Not a step" is almost equivalent to the French *ne pas*; for example, *nā 'kampata padāt padam*, "he did not budge a step" (at all), a common phrase, as in ix. 57. 46. The later epic has *padakam padakāṃ śanāih*, "step by step, slowly," xiii. 53. 35, and another passage has *ekapadam* in the sense of "in one word," iii. 313. 69.

Arms and fathom: Estimated at four or five cubits in later works, the *vyāma*, space between the outstretched arms, is used a few times, but only of trees and sacrificial appurtenances. A bough *daṣṭaryāma*, ten *vyāmas* long, is mentioned in a repeated phrase, iv. 23. 21, etc., and a *reṭi daṣṭaryāmāyatā navotsedhā*, "ten *vyāmas* long and nine high," in iii. 117. 12; while the circumference of a sacrificial post, as made in the good old days of marvels, is given as one hundred, *yūpatḥ ṣaṭaṣṭā-maḥ pariṇāhenu*, vii. 68. 12. The divine disease of Kṛṣṇa is *vyāmāntara*, which the scholiast says is "five cubits, the space between the outstretched arms," *prasaṛitayor hastayor yūṛḍu vistāraḥ pañcuhastamitāḥ tīrat*, v. 68. 2. It may be called in general (cf. *Çat. Br.* i. 2. 5. 14, etc.) a sacerdotal measure, not employed in the tables, and, except for the measurement of trees, it keeps this character in the epic.

Rods and Bows: Another sacerdotal implement was the *ṣamyā* rod, the east of which, according to the epic, measures the interval between the altars set up by a very pious man. The rod, according to the scholiast, is pointed at one end and has a thick knob at the other, and is thirty-six thumbs, two and a half statute cubits, in length. When one "sacrifices by the rod-east," one goes around the earth sacrificing at intervals, which are measured by the distance a strong man can sling the rod, *ṣamyā* in the epic, or, according to the scholiast, *śampā*, from its fall, *sampatati*. The technical expression is *ṣamyākṣepa* (*vīdhinā*) or *ṣamyākṣepāḥ* (*devān yujati*), "sacrifice to the gods by the east of the rod," iii. 90. 5; xii. 223. 24; xiii. 103. 28. The only varying usage is found in iii. 84. 9, where a Tirtha is described as being "six rod-casts from an anthill," *ṣaṣṭu ṣamyānipāteṣu valmīkāt*, but this is still in a sacerdotal connection. Measure by arrow-casts is confined to estimating time, as will be shown hereafter.

Bows are used for measurement, but the epic examples give no clue to the length, though later authorities reckon this as equal to a staff, *daṇḍa*, or four cubits, which must be regarded as the length of a bow (six feet). In the three epic cases, two forms of the word are used, *dhānuḥ* and *dhanuḥ*: "dragged eight *dhanuḥ*," i. 153. 40; "struck ten *dhanvantarāṇi*," viii. 83. 9; "land measuring one and a half thousand of bows," *dhanuṣām*, viii. 88. 10 (cited above, p. 137).

Yuga : This is said to be a measure of four cubits. In iii. 296. 10, *yugamātroditā sūrye*, "when the sun is up a *yuga*" (N. *yugam hastacatuṣkam*), when the matutinal-rites are performed (*kṛtvā pāurvāhnikāḥ kriyāḥ*). I have not found the word elsewhere in this sense, and as a measure it does not appear to be an old term.

Nalva : I am not aware that the *nalva* or *nala* is an early term of measurement. In the great epic it is confined to the seventh book and to the mass which I call pseudo-epic, especially to the Harivaṅga. It is, further, not in the Rāmāyaṇa in its earlier form but it has been added to it in the later re-writing of that poem. The word epitomizes the gradual growth of the epic. The Bombay text has *nala* and *nalva*, but not without metrical reason for the choice. We find in vii. 70. 16 (the latest addition to the chronicles of kings), *vedīm aṣṭanulotsedhām*, which is repeated in xii. 344. 60. In the former case it is defined by the scholiast as four cubits; in the latter, as a finger, with *tala* as v. l. Again, vii. 156. 58, *mahāratham triṅganvalvāntarāntaram*, and, in a scene which in many points is a mere repetition¹ of this, vii. 175. 12, *nalvamātram mahāratham*, which is repeated in 176. 15 (written *nalla* in these two verses in C.), but nowhere else till we get to xii. 29. 143, where, also in the chronicles of the "kings that died," we find that Prthu Vāinya gave to the priests *hāiranyāns trinalotsedhān parvatān ekaviṅcatin*. It is interesting to see that the Droṇa account of the "sixteen kings," in adding the sixteenth, has taken from Prthu this landation and inserted it in the next and last (lacking in Cānti). In vii. 62. 13, the phrase is *hāiranyān yojanotsedhān āyatān gatayojanam*, giving height and length. In the cases cited it will be observed that *nala* is not simply a *falsche Schreibart* (PW.), but a necessary metrical alteration (*nalla* alone being wrong). In xii. 154. 7, a tree is *nalvamātraparipūhah* (where N. defines the measure as *hastānām gatacatuṣṭayam*, which removes the doubt expressed in PW. as to *catuṣṣṭayam*), "four hundred cubits in circumference" (this attributes the greatest circumference to the tallest

¹ It repeats the preceding text, but *adhyāya* 175 is the original. Besides the one *nalva* raised to thirty in 156, we have the *cakra*, which in 175. 46 has still only 1000 spokes while in 156. 77 it has 100,000.

tree known, the *śālmali*). A Kālāmra tree is *yojanotsedha*, vi. 15 (not a *Dvīpa*, PW., but a tree that gives perpetual youth). A following stanza tells of another wonder-tree, estimated as being one thousand and one hundred leagues tall, which measures the *utsedha* or height from earth to sky, vi. 7. 21. Its circumference is "of *arutnis* one thousand and hundreds ten and five" (2500 cubits).

Kroṣa : The *kroṣa*, Anglo-Indian *koss*, which means literally a "scream" and is estimated in later works as two thousand "bows" or a fourth of a *yojana*, is the usual number to indicate travelling distances, not in multiples but always as a *koss*, as if one always went just one *koss* unless he went at least as much as half a *yojana* (rare, ii. 2. 22, *yojanārdham atho gtvā*, in accompanying a departing guest) or a *yojana*, which latter is used for all long stretches. The almost universal use of *yojana* for this purpose rather than two or three *koss* would indicate that the *yojana* was shorter than is usually assumed. It is not often that a *koss* indicates height, but the examples below will show one case of mountains thus measured. For journeys, besides the use of the half-league in the example just given and the league, as in vii. 112. 12, *itas triyojanam manye tam udhvānam . . . yatra tiṣṭhati*, "I think it is a course of three leagues from here (to) where he stands," we have in the following examples the regular (single) *koss*: iii. 271. 53, *kroṣamātrāgātān aṣvān*; vii. 99. 9, *ratho kroṣam atikrānte*; ix. 29. 42, *kroṣamātram apakrāntaḥ*; xi. 11. 1, *kroṣamātram tato gtvā*. In other measurements: vii. 103. 37, *tasthān kroṣamātre samantataḥ*, "at a distance of a *koss* on every side."

A great archer shoots a *koss*: "He seized several arrows and when he had fitted them to his bow quickly as if they were one, they fell at a distance of a *koss*," *kroṣamātre nipatanti*, viii. 79. 57; *rathasthito 'grataḥ kroṣam asyati śarān*, vii. 99. 9. Mountains "raised a *koss*" are mentioned in vii. 65. 10, *parvatāḥ kroṣam ucchritāḥ*. Most of the other cases of the use of *koss* are quite as useless in helping to a determination of its real length. They are as follows: For a *koss* on every side around a beleagured city the earth is broken up and mined, *samantāt kroṣamātram*, iii. 15. 16; ponds are of this extent, *vāpyaḥ kroṣasammitāḥ*, vii. 56. 7; the heroine can be smelt up to a *koss*, *gandhag cā 'syāḥ kroṣamātrāt pravāti*, i. 197. 36; *kroṣāt pradhāvati*, i.

167. 46 (see below on *yojana*). The only passage that seems to cast light on the epic measure is found in xiii. 90. 37, where speaking of the purifying effects of the men "fit for the row" and of the *daśapārṣa* (gl. 27), that is, a man tenth in descent in inherited Vedic wisdom (one who has nine generations of pious and learned ancestors), the poet says: "They purify as far as they see . . . even one such would purify to a distance of two and a half *koss*," *yāvād ete prapacyanti puṅktyā tāvat punanty uta . . . kroṣād ardhatrītyā ca* (above, p. 133) *pūvayed eka eva hi*. Here, as two and a half *koss* are regarded as less than the limit of ordinary ability to see a person, and five and a half miles far exceeds this, it would seem that in the epic the *koss* was not two miles and a quarter but nearer one mile, as is the estimate of the Viṣṇu Purāṇa (which ascribes to it, Colebrooke, *loc. cit.*, four thousand enbits, a thousand bows, against the Āditya Purāṇa's estimate of eight thousand enbits), or, exactly one mile and one eighth rather than two miles and a quarter. This, however, is based on two surmises, first, that the "even one" clause introduces a restriction applicable also to the distance as less than that previously mentioned, which seems to me legitimate, and, second, that the expression "as far as they can see" means as far as they can see a person (that person becomes pure by being seen). This latter surmise also seems to me to rest on the intended meaning, though it is possible that the expression merely means as far as eyesight can reach, in which case the passage is as useless as the others.

Gavyūti: After the *koss* comes the *gavyūti*, estimated by later writers as two *koss*. It is used in the epic to give distance, *gavyūtīmātre nyavasat*, "stayed at a distance of four miles," iii. 289. 29; and, in the homfast of the late book of Droṇa, the battle-array is estimated as extending twelve *gavyūtis* or forty-eight miles, *dirgho dvādaśagavyūtiḥ* (*paścā 'rdhe pañca viśṛtaḥ*, and twenty in the rear), vii. 87. 22, a statement the more remarkable as the whole battle-field is only five leagues in extent, v. 195. 15. In vii. 87. 14 is found also the expression, *gavyūtiṣu trimātrāsu* (*tiṣṭhata*). The *gavyūti* is seldom used for travellers, but often for stationary extent of hall, camp, and quiescent distance, as in xii. 125. 18, where a deer springs ahead, but stands a *gavyūti* distant, *gavyūtīmātreṇa, bāṇapatham muktṛvā, tasthivān*. At least, it is not till the

late "house of lac" scene, i. 151. 20, *gavyātīmātrād āgatya*, "coming up to a distance of a *gavyāti*," and in the (also late) scene at (Gorresio) R. i. 79. 27, *gatvā gavyātīmātrakam*, that I find it with a verb of motion. This is doubtless because of its meaning originally a meadow, that is a field or acre, rather than a measure of length. According to Nilakaṇṭha, *goyuta* is the equivalent of *gavyāti*, as used in xiv. 65. 22, *goyute goyute cāi 'va nyavasat*, "he rested (camped) at every *gavyāti*," designating a daily march retarded by the weight of treasure carried. In any case the term is a solecism. A march like this, by the way, is described as being made *kramena*, step by step, "slow march," xv. 23. 16.

Yojana: The "yoking" called *yojana*, estimated at two *gavyāti*, four *koss*, eight thousand bows, and consequently sixteen thousand cubits in the Āditya Purāṇa, is reckoned in the Viṣṇu Purāṇa as only half of this distance, that is, as nine miles in the former and four and a half in the latter work (Colebrooke, *loc. cit.*), but in the Mārkaṇḍeya Purāṇa as four *gavyāti* or eight *koss* (*cit. PW.*). I shall render it league. It is the longest measure and is used in estimating extent of length and surface. As the syntactical construction of this word includes that of all the others previously mentioned, I have reserved the subject for this paragraph. The construction varies between adjective compounds in the modifying word, adjective compounds with *yojana*, and accusative (nominative) or ablative of extent, as follows:

i. 30. 23, *sa tataḥ śatasāhasraṁ yojanāntaram āyataḥ
kālena nā 'timātrena*,

"in a short time he went a hundred-thousand league-interval,"
i. e. a distance (measured by) a hundred thousand leagues.

xiv. 9. 34-35: *sahasraṁ dantānām śatayojanānām . . . dañ-
śtrāś caturā dve śate yojanānām*, "a thousand of hundred-
league teeth . . . four fangs two hundred of leagues." i. 175.
43, *tat sāinyam kālyamānam triyojanam*, "the army was
driven three leagues;" xii. 170. 15, *itas triyojanam gatvā*,
"going three leagues from here."

ii. 7. 2: *viśtīrṇā yojanaśatām śatam udhyardham āyatā . . .
pañcayojanam ucchritā*, (a ball, *sabhā*) "one hundred leagues
broad, one hundred and fifty long . . . five leagues high;" ib. 8. 2,

śatayojanā vistārāyāmasampannā bhāyasī cā 'pi, (a hall) "of a hundred-leagues, complete in breadth and height, and even more"; ib. 10. 1, thus in B:

*sabhā Tāṅgravanī, rājan, śatayojanam āyutā
vistīrṇā saptaṭiḥ cāi 'va yojanā 'tisitaprabhā,*

where C. has *yojanāni situprabhā*. C. has the right reading; the construction is "broad, seventy leagues" (in the nominative), and not "seventy were broadened" (leaving *yojanā* to be construed as a Vedic form with *saptatiḥ*), for the construction throughout, as is customary with *vistīrṇa* and *vistṛtu*, is to make *vistīrṇā* agree with *sabhā*.

Ordinarily, the accusative, as in *kroṣam uccṛitaḥ* (above, p. 146), expresses the extent, and this may be assumed to be the construction when the form leaves the case ambiguous, as in the answer to the question, "How long is the road between the world of Yama and the world of men?" (given as) "between (etc., is) eighty-six thousands of leagues," *Yamalokasya cā 'dhvānam antaram mānuṣasya ca kīḍṛṣaṁ kim prajānam cāi? śaḍaṣṭisahasraṇi yojanānāni narādhipa Yamalokasya cā 'dhvānam antaram mānuṣasya ca*, iii. 200. 44 and 46. Here it is clear that the numeral is in the accusative, and it is probably governed, as is *adhvānam*, by *gantavyam*, as in the following: *kiyaḍ¹ 'adhvānam asmābhir gantavyam imam īḍṛṣam? etāvud gamanāni tava*, xviii. 2. 26 and 28. The locative may take the place of the accusative when the word "way" is used, as in xiv. 27. 3, *kiyaṭi 'adhvani tad vanam*, "(on) how great a way is that forest?"

I do not find the nominative used to measure distance of movement (evidently because it is impossible to say one goes to a nominative) but only of stationary distance, that is, where no progress toward is implied. For example, one may not say the way is a *kroṣaḥ* but only *kroṣam* by analogy with "one goes a *kroṣam*." But, as in the example above, one may say a hall is extended so much and use the nominative, because the word extended does not mean goes to that distance; but extended is broad, and this pto. adj. is equivalent to the noun breadth.

¹ But *kiyantam kalam*, ib. 5. 4. There is a passage, i. 126. 8, where *adhvan* appears as a neuter, *prasannā ūrgham adhvānam sahksiptam tad amanyata* (N. supplies *gamanam*).

So in estimating the (stationary) height of a mountain one says that it is "upraised" so much in a compound preceding, as in *ṣaḍyojanasamuechritāḥ* (*Kāilāsaḥ*), "a six-league-upraised" (mountain), iii. 139. 11; or that it is so many leagues, without anything to indicate that the numeral is not a predicate nominative, as in *trayastrīṅśat sahasrāṇi yojanāni hiraṇmayāḥ*, "golden (Meru is) thirty-three thousand leagues," iii. 261. 8; *yojanānām sahasrāṇi pañca ṣaḥ Mālyavāt aṭha*, "Mālyavat (is) five-six (eleven) thousands of leagues," vi. 7. 29;¹ or that it is "upraised" so many leagues in the nominative, as in

Meruḥ kanakapurvataḥ . . . se. tiṣṭhati
yojanānām sahasrāṇi caturaśītir uechritāḥ
adhastāv caturaśītir² yojanānām,

"golden Meru . . . (stands) eighty-four (nom.) thousands of leagues upraised, (and) under(-ground) eighty-four (nom., se. thousands) of leagues," vi. 6. 10-11.

Further, there is the one construction where, instead of saying that the height or breadth of a mountain is so much, one may employ partitive apposition with (apparently) a nominative (predicate), as in

aṣṭādaśa sahasrāṇi yojanāni, viṣṭāpate,
ṣaṭ śatāni ca pārṣṇāni viṣṭambho Jambuparvataḥ
lāvapasyu samudraśya viṣṭambho dviguṇaḥ smṛtaḥ,

"eighteen thousand leagues and six full hundreds the breadth (is) Jambu-dvīpa, and the salt sea's breadth (is) recorded (as) twice as much," vi. 11. 5-6. The ordinary construction in such a case is to prefix the number, if it is easily managed, as part of a compound, as in *āḍītyaparvataṁ dūṣayojanavistāram*, "of ten-league-extent," xii. 328. 23; or to put the dimension in an oblique case, as in

ekāikaṁ yojanaśatāṁ vistārñyāmataḥ samam,

"each (city was) one hundred leagues (of a league-hundred) alike in respect to breadth and length," riii. 33. 10 (compare *pramāṇñyāmataḥ samam*, of a man, i. 222. 31); but with such

¹ Here occurs a word rare enough in early texts to be noticed, *mahā-rajata* as gold-colored people). Cf. *JAOS.*, xx., p. 221 for *hiraṇya* as silver.

² For the meter, cf. No. 37 in the *Śloka*-forms of my *Great Epic*.

an unmanageable number as that above it is more natural to have the construction of the second part of the sentence a genitive, with the dimension in the nominative.

The locative gives the extent only when this is implied or conditioned by the context, as "on the way" (above) and in *ekādśava sahasrāṇi yojanānām samucchritam, adho bhūmer sahasreṣu tāvatsa eva pratigṛhitam*, (Mt. Mandara), "eleven thousand of leagues upraised, and supported on just as many thousands below the earth," i. 18. 3. So "at six-rod-casts from the antbill" (above, p. 144), is only a location of place, not of extension; also *kroṣamātre* (p. 146).

Finally,¹ in estimating distance to a certain extent, the ablative may be used with some prepositions to convey the notion of exceeding the limit, or simply, beyond, while the ablative alone or with *ā* indicates the limit itself up to which the distance implied extends. Of the first case an example is found united with the instrumental in

xii. 336. 9, *Meroh sahasrāṇi sa hi yojanānām*
dvātriṅśato 'rdhvam kavibhir niruktaḥ,

"this (white island) is said by the poets (to be) from Meru more than thirty-two thousands of leagues" (by thousands more than thirty-two).

The antique expression *mūlāt*, "up to the root," is used, though rarely, both in this sense and in that of "from the root," that is from the beginning, but it is significant that the epic usually expresses the idea by a compound, as in

tataḥ samūlo hriyate nadīkūlād iva drumaḥ,

xii. 95. 21; or it is paraphrased, for example, *na mālaghātāḥ kartavyaḥ*, xii. 268. 12. Moreover, in words expressing distance, the examples leave it a little doubtful whether the ablative means "from" or "up to," but by analogy with the same phrase with the preposition it would seem that the latter idea was that of the simple ablative. Thus, to express the idea of a smell extending a *koss* we find *kroṣamātrāt pravāti* and *kroṣāt*

¹ Of course I omit idioms which may be translated to give extent without really expressing this, such as *brahmādiṣu tṛpānteṣu bhūteṣu parivartate*, "pervades all beings from Brahman to grass," iii. 2. 72 (a common phrase).

pradhāvati (above, p. 146); *tasyās tu yojanād gandham ājighranta narā bhuvi*, i. 63. 82; *āyojanasugandhin*, i. 185. 21; and, in the province of sight, *yojanād dadṛge*, ii. 24. 22; *āyojana-sudargana*; and finally, *ā* with the ablative, as in *locanāir am-jagmus te tam ā dṛṣṭipāthāt tadā*, "then they followed him with the eyes up to the limit of their vision," ii. 2. 26. As with time-words, *yāvat* is also used, *yāvāc Ūrmaṇvatī*, "as far as the river," i. 138. 74.

Another reason for taking the ablative as one expressing the limit up to (rather than the origin) is that it thus offers a perfect parallel to the use of the ablative with time-words, for, as I shall show in the next section of this article, the idea of a simple time-ablative expressing the time after which any thing occurs is erroneous, though this is the only explanation of this ablative given by Speyer (and adopted by Whitney). On the contrary, the time-ablative, unless expressly accompanied with *ūrdhvam* or its equivalent in the sense of "beyond," always indicates time up to the limit expressed by the ablative, and so the extent-ablative indicates the extent up to the limit expressed by this case. With *adhi* the ablative means above, over.¹

When the name of a dimension is given, it is usually compounded with the number, and this has led Speyer in his excellent *Sanskrit Syntax*, § 54 a), to remark that "when naming the dimension of a thing one does not use this accns. [of space], but avails one's self of bahuvrīhi compounds." With few exceptions this is quite correct and as a general rule is perfectly unimpeachable. Thus in iii. 82. 107:

*ardhajojanavistārā pañcayojanam āyatā
etāvati Devikā tu,*

"of half-league-breadth, five leagues long (extended)—such is the size of Devikā."

vii. 66. 16, *ṣaṭtriṅṣadyojanāyāmā² triṅṣadyojanam āyatā
paścāt purāḥ caturvīṅṣad vedī hy āsīt dhiraṇmayī,*

¹ I take *yojanād adhi* in C. ii. 619 in this sense, but B. 14. 54 has *yojanādv adhi* (*triyojanāyatanā sadma triskhandham y. a.*), and PW. interprets C. as "a Yojana bigb." This preposition, by the way, is used (in a way not recognized in PW. or pw.) with gen. of place, in H. ii. 79. 12, *śapatnīnām adhi nītyam bhavedyam*, "over my rivals."

² C. has *ṣaḍvīṅṣad*, cl. 2,349, which inverts the ratio and makes *āyāma*, length, into breadth.

"of thirty-six-league-length, thirty leagues broad (extended), in the rear (and) in front twenty-four (leagues), was the golden *vedi*."

This arrangement, by which one member is made a compound of the noun of dimension and the other has the participle, is quite a favorite. The following example illustrates it again, together with another illustration of the extent given by a number-word, apparently in the accusative:

xiv. 58. 33, *ito hi nāgaloko vāi yojanāni saharagaḥ*,

"from here the dragon-world (is) leagues by the thousand;"

ib. 37 and 40, *nāgalokaṃ vivega ha, dadarṣa nāgalokaṃ ca yojanāni saharagaḥ . . dvāraṃ sa dadarṣa pañcayojana-vistāraṃ āyataṃ gaṭayojanam*, "he went to the dragon-world, and he saw the dragon-world, leagues by the thousand . . and he saw the five-league-size gate, a hundred leagues extended."

Another example of the exceptional usage, whereby when naming the dimension of a thing one uses the accusative, is given by this case:

xii. 282. 7-8, (*dadarṣa*) *Vṛtraṃ dhiṣṭhitam parvatopamam, yojanānāṃ gaṭāny ūrdhvaṃ pañcocchritam, ariṇḍama, gaṭāni vistareṇa 'tha trīṇy evā 'bhyadhikāni vāi*, "he saw Vṛtra stand like a mountain five hundreds of leagues upraised on high (tall), and three hundred more in extent."

When two dimensions are given, they may follow adverbially, as in one of the examples above and in xii. 339. 9, *gaṭayojana-vistāre tiryag ūrdhvaṃ ca*, "hundred-league-extent (peaks) transversely and up," that is, two peaks having this extent in both directions; for *vistar*, *vistāra* is extent in general (*ākhyānam bahuvistaram*, "a long story," vii. 52. 37; *gaṭayojana- and anekayojana-vistāra*, of ocean, "leagues broad," iii. 282. 59 and 45), and may even limit, as a general term, *āyāma*, which is always length, as in (*dvīyojanasamutsedhā*) *yojanāyānavistarā*, "(two leagues high and) a yojana-length-extent weapon," vii. 175. 97 (not in C.).

This last sentence (compare also the *naiva* citations, above, p. 145) gives the regular word for height, which is construed in compound form, as here and in i. 29. 30: *ṣaḍ ucchrīto yojanāni gojasa taddvignṇāyataḥ karmas triyojanotsedho duṣayojana-*

maṇḍalāḥ, "an elephant six leagues upraised and twice as extended; a three-league-height and ten-league-circle tortoise" (in English, three leagues tall and ten round).

ON π .

Although no word in the epic expresses the relation between the diameter and the circumference, yet this relation is given in figures, as applying to the size of the sun, the moon, and the "planet" that swallows them, the moon being rather larger than the sun.¹ The account of the size will be found at vi. 11. 3 (Rāhu); 12. 40 ff.; of the cause of eclipse, i. 19. 9 (*rāhu-mukha*). The relation between the diameter and the circumference differs inversely according to the size of the object, the greatest circle having the smallest ratio. Of the three heavenly bodies, Svarbhānu or Rāhu (the devouring planet) is circular, *parimaṇḍala*, no less than the moon and the sun, so that π can be established in this case as well as in the others. Its diameter, *viṣkambha* (breadth), is twelve thousand leagues, *yojanas*, and "in its circumference and extent," *paripāhena vipulatreva ca*, it is "thirty-six thousand sixty hundred" or 42,000 leagues, as say the Puranic sages, *buddhāḥ paurāṇikāḥ*. The moon's diameter, *viṣkambha*, is eleven thousand and its circle, *maṇḍala*, is thirty-three (thousand) and "sixty-less-one" (hundreds, given in the text as the *viṣkambha*, but this must be *paripāha*, as in the preceding case), making the sun in thousands (33) and in hundreds (59) equal in all to 38,900. The sun in diameter is "eight thousand and two more," *anye*, and its circle is equal to thirty (thousand), *maṇḍalan triṅśatā samam*, and fifty-eight (hundred) in extent, *vipulatreva*, or 35,800. Thus (instead of $\pi=3.1416$):

¹ This is not strange. In fact, the full moon in India on a clear night certainly looks larger than the sun even when the latter is on the horizon. Especially at the end of a dusty day; when the moon seems twice the size even of the barvest moon of this country. But this is not the only reason for the great size attributed to the heavenly bodies as compared with that assigned by the Greeks. Even the stars are regarded as huge worlds "because though small as lamps in appearance they are so far removed" (the passage is given in my *India, Old and New*, p. 59, from iii. 42).

Rāhu, 12,000: 42,000 $\pi=3.50$

Moon, 11,000: 38,900 $\pi=3.53+$

Sun, 10,000: 35,800 $\pi=3.58$

There is nothing to indicate that the *yojana* here used is the special astronomical *yojana* of later works. According to the *Sūryasiddhānta*, iv. 1, the sun's diameter is 6,500 (astronomical) *yojanas*, and the moon's is 480, while π in that work is 3.1623 and 3.14136, according to circumstances (Whitney's notes, *J.A.S.* vi. pp. 183 and 201). A little later, in the fifth century, Āryabhaṭa (Thibaut, *Astronomie*, etc., p. 75, in Bühler's *Grundriss*) knew that $\pi=3.1416$, and it seems grotesque enough that even an epic poet could give such statements as those made above, if he had an approximate notion of the true relation. For it is not as if the author carelessly (poetically) said that the sun's circumference is about three and a half times its diameter. The numbers are given in detail for three different circles and show that the calculation had been made in each case. But any boy with a string and a tree-stump could get nearer to the true ratio than 3.5.

[To be continued.]

A Phoenician Royal Inscription.—By CHARLES C. TORREY,
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In the summer of the year 1900, a number of stones, bearing the same Phoenician inscription in somewhat varied form, were unearthed near Sidon. They formed part of an extensive ruin, the existence of which had been unsuspected until accident brought it to light.

The locality is somewhat less than two miles north of the modern city, half way up the slope of the hills, which face the sea and are here about half a mile distant from it. At this point the Auwaly river breaks through, and the hills rise very abruptly from it, especially on the south side, where the ruin just mentioned was discovered. It has long been known that large buildings of some sort must have stood in this neighborhood, for great blocks of hewn stone have been found, in considerable number, on either side of the river. The bridge which crosses the Auwaly here is built in part of such blocks, the position of the marginal draft on some of them showing that they were not originally intended for their present place.

There is good reason to believe that the ancient city of Sidon extended far beyond the limits of the present city, especially to the northward. Indeed, we have some evidence that it reached even to the locality just described. The geographer Dionysius Periegetes (third or fourth century A.D.) says of Sidon, in an oft-quoted passage, that it was situated "on the Bostrenus." It is quite beyond question that the Auwaly river is here meant, but few in modern times have been disposed to believe that the old city actually extended so far; see, for example, the article "Bostrenus" in the new edition of Pauly's *Real-Encyclopædie*. It is quite possible, however, that the statement of Dionysius was literally accurate; at any rate, the evidence now brought to light must re-open the question.

The discovery of the inscriptions was on this wise. Workmen engaged in removing the stones of a large wall which had been partially uncovered came upon a block with an inscribed face. No sooner had this been removed than another, similarly





inscribed, was found. Others followed, until (as was reported) five in all had been taken out.¹

Happening to be in Sidon soon after this, in the fall of 1900, and hearing of the discovery of the inscriptions, I visited the spot several times, and also managed, after some difficulty, to get sight of one of the inscribed stones—the same one which is reproduced in the present article, though its two pieces were then in different localities, and it was not until some time later that I was able (thanks to the help of Professor Jewett, of the University of Minnesota) actually to get possession of it. A rather poor squeeze made from one of the other stones gave valuable help. The inscription presented the usual proportion of difficulties, though nearly every letter could be made out with tolerable certainty. All its most important features, however, were plain at the first glance. The building from which the stones had been taken was a temple, built and dedicated to the god Ešmun by Bad-‘Aštart, King of Sidon, “grandson of King Ešmun‘azar.” The points of contact with the Ešmun-‘azar inscription were also sufficiently obvious, and seemed to furnish a clue to the relative position occupied by this king Bad-‘Aštart in the Sidonian dynasty already partially known. The new inscription thus proved to be one of no ordinary importance.

As for the temple-ruin, the little that could be seen consisted of portions of two parallel walls running east and west. Each was built of nearly cubical blocks of limestone, from three to four feet in thickness. The upper wall consisted of two courses of stone; that is, was seven or eight feet in thickness. The lower wall, perhaps fifty yards further down the slope of the hill, was still more massively built. The whole edifice, thus solidly constructed, and of such imposing dimensions, was situated just at the turn of the mountain, where the river valley opens out into the narrow maritime plain. It is an ideal site for a temple, the outlook embracing a wide strip of the sea, the picturesque river below, and the whole extent of the deep valley beyond; it is, moreover, the one spot near Sidon where a comparatively unobstructed view eastward is to be had.

I was unable to gain sufficiently exact information as to the position of the inscribed stones in the wall (it was the lower

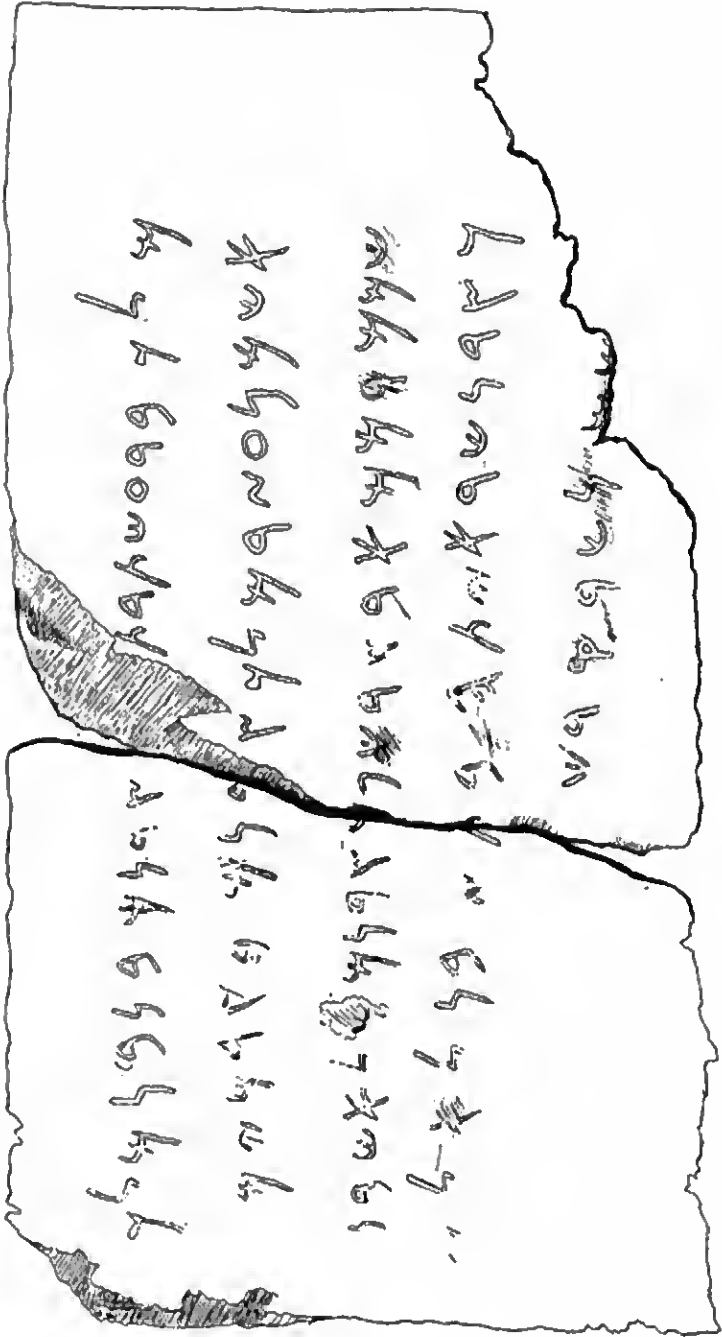
¹ Regarding the subsequent discovery of a sixth stone, see below, p. 178.

wall) where they were found. Of this, however, I was repeatedly assured by workmen who had seen them *in situ*, that they occupied no typical position, but that the inscribed face was sometimes uppermost, and again beneath, or on one of the perpendicular sides. All five were found very near together, the blocks containing them being of the same general shape and size as those already described, and situated in the core of the wall, so that no one of them could have been seen when the edifice was completed.

The inscription was not exactly the same in all cases. On two of the stones it was practically identical with the one which I was so fortunate as to secure; the only differences, so far as I could ascertain, being due to peculiarities of orthography, or to the carelessness of the stone-cutter. My knowledge of one of these two (which I shall cite, for convenience, as Inscription B) was gained from an imperfect copy—not a squeeze—made by one who was quite unable to read the inscription; the other—the one from which the squeeze above mentioned was made—I was permitted to see on one occasion, but only for a moment, not long enough to enable me to study it, or even to make a hasty copy. This latter inscription, a very carefully executed and well-preserved specimen, exhibited one or two forms of letters which were so peculiar as to lead me to doubt its genuineness; these doubts I have since withdrawn, however, and shall have occasion to refer to it (citing it as Inscription C) once or twice in the sequel. On a fourth stone (Inscription D)—to judge again from a single copy—the wording was somewhat abridged; moreover, in this case just half of the inscription was missing, and it was evident that it had originally occupied two adjacent stones, in two long lines and the beginning of a third, instead of filling five or six lines on a single stone. Regarding the fifth stone which was reported to have been found I could gain no information at all. Possibly it may have contained the missing half of the two lines just mentioned.¹

It remains to describe the stone containing the inscription (designated as A) which is published and commented upon in the following pages.

¹ All of these stones were "on the market," and at least two of them had left Sidon before my arrival. I do not know what has become of any one of them excepting the one which I myself purchased.



It is a slab of soft limestone, three and one-half feet in length, one foot and eleven inches wide, and five inches thick. It seems to have been sawn from one of the blocks described above as forming the building units of the temple, and to have been accidentally broken in the process, so that it now consists of two pieces, which join fairly well. Fortunately, this break has not obliterated any letters which cannot be supplied with certainty. In the lower right-hand corner, a piece which contained several letters or parts of letters has been broken away. The surface of the stone is not evenly weathered, but is somewhat more worn towards the left side. For this reason, a number of the characters on the smaller piece are nearly obliterated, while those on the larger fragment are for the most part very distinct.

The inscription is in four and one-half lines, the number of letters to the line varying between nineteen and twenty-four. The end of the line happens in each case to coincide with the end of a word.¹ The characters used are of a type identical with that which appears in the inscriptions of Tabnit and Ešmun'azar. The only letter whose shape seems to deserve special mention is the **𐤊** which stands at the beginning of the fourth line. So far as its form is concerned, it might well be a **𐤊** (though somewhat long, and with not quite the usual slant); but if I am right in my understanding of the passage, the letter is a form of **𐤊**, differing but very slightly, after all, from the one which is seen at the end of the first line.

The workmanship is generally very good, though occasionally a trifle careless. The letters were originally colored with red paint, which still appears very distinctly in the better preserved parts of the stone, and can often be found by lightly scratching the surface in the more weathered portions.

The text of the inscription follows. Letters destroyed either wholly or partially by the accidental breaking of the stone are indicated by square brackets []; letters which cannot be clearly made out or which for any reason should be designated as uncertain, by a dot placed above.

¹ In the parallel inscriptions, on the other hand, it happens in several cases that a word is divided between two lines.

מלכברעשתרת[מלב]צרנמבנמלב
 אשמנעזרמלבצר[ר]נמבצרנימ
 שמטרממארצרשפ[מ]צרנמשלאשבנ
 בצרנשראיתרוכ[ר]זכנלאלי
 [לאשמ]נשרקדש

This I should divide as follows:

מלך בר עשתרת מלך צרנם בן בן מלך
 אשמנעזר מלך צרנם בצרן ים
 שמם רמם ארץ רשף מצרן משל אש בן
 בצר נשל אית הכת ז בן לאלי
 לאשמן שר קדש

TRANSLATION.¹

The king Bad-‘Aštart, king of the Sidonians, grandson of the king | Ešmun‘azar, king of the Sidonians; reigning in² Sidon-on-the-Sea, | High Heavens, [and] the Rešep District, belonging to Sidon; who built | this house like the eyrie of an eagle; (he) built it for his god, | Ešmun, the Holy Lord.

COMMENTARY.

Line 1. Regarding the name Bad- (or Bod-) ‘Aštart, **בר עשתרת** “Offshoot (or Branch) of Astarte,” see Lidzbarski, *Handbuch der nordsemitischen Epigraphik*, p. 134, note 4. A king of Sidon bearing this name is known to us from the inscription *CIS.* I 4. On the question whether our king is to be identified with this one, or with either “Strato” mentioned by Greek writers, see below.

The word **מלך**, in the middle of the line, is entirely broken away.

צרנם as usual for the people, or the political unity (as almost always on the coins of Sidon, for example); for the city itself,

¹ It is hardly necessary to say that this translation is offered as an attempt, not as the final solution. No one can realize more keenly than I the uncertain character of many of the conclusions which are reached in the following pages.

² Or, ruling over.

צדן, so in lines 2 and 3—in the latter case, the city inclusive of its outlying districts. The letters of the word are all distinctly legible.

בן בן מלך אשמנעזר, "Grandson of King Ešmun'azar." The very same words in the Ešmun'azar inscription, line 14. As will soon appear, the coincidence is not merely verbal, but the same king—the one known to us as Ešmun'azar I.—is meant in both inscriptions. It is unfortunate for us that Bad-'Aštart should have omitted to give the name of his father. It would not be difficult to imagine a plausible reason for the omission, even if we suppose the father to have been King Tahnit. It is possible, however, that the latter was the uncle of Bad-'Aštart, not his father. See further below.

Line 2. אכצדן ים. In Inscription C, this is written בצדן ים, that is, this text affords us a new example of the rare form אכ of the preposition כ, a fortunate circumstance. It is plain that צדן ארץ ים is the equivalent of the phrase צדן ים, which occurs twice (lines 16 and 18) in the Ešmun'azar inscription.¹ In the latter passages, there is nothing to show that the phrase meant anything more definite than 'the parts of Sidon adjoining the sea.' In the new inscription, on the other hand, if my reading of it is not erroneous, three separate and definite districts "belonging to Sidon" are mentioned by name; and in such a way as to imply that these three districts comprised in themselves all the territory properly included within the limits of the city. The name "Sidon-on-the-Sea," as the designation of one (and apparently the principal one) of these districts, suggests first of all the cape on which the modern city stands. Here, of course, was the citadel, and the most important part, of the ancient city, and it is highly probable that this was the צדן ים of our inscriptions. The district bearing this name may, however, have included also an adjoining portion of the maritime plain; see further below.

Line 3. שנים רמים. An extremely interesting phrase, especially because it at once suggests the problematic שממארם

¹ For a third (probable) variation of this phrase, see below, page 172.

² The reading of Inscription C is noteworthy here. In the second ם of שנים, the shank of the letter slants sharply to the right, and the top has a somewhat unusual shape; the resulting character does not closely resemble any known Phoenician letter (it certainly is not ם).

of the Ešmun'azar inscription (lines 16 and 17), with which it is certainly to be connected. As the name of a district—which seems to be absolutely required in the Bad-'Aštart inscription—it can only have designated the heights just back of Sidon, including probably in that case a strip of hill-country extending as far northward as the city itself extended. The name "High Heavens" is a fanciful one, it is true; but abundant parallels in this regard can be found among Semitic place-names. Regarding the use of the twice-repeated שם אדרם in the Ešmun'azar inscription, I confess to some perplexity. This much, indeed, seems now to be established by the new evidence, that the letters are to be divided in the way just indicated, שם being the noun, "heavens," and אדרם (אדרם?) the attributive adjective, "glorious, mighty." Two difficulties seem to stand in the way of regarding this phrase as merely another form of the name given by the Sidonians to the hill-district of their city: (1) We should expect the form of a proper name such as this to be fixed, not variable; (2) the meaning "hill-district," while it suits the context admirably in Ešm., line 17, does not, at first sight, seem to be in place in line 16. But these two difficulties are more apparent than real. As for the variation in the form of the name, such unstable usage in the case of local designations is very frequently met with,¹ especially where the name has been only a short time in use, as may well have been true in this case. It is possible, of course (though the supposition is not a necessary one), that the district was first named in this way in the time of Bad-'Aštart, and that the adjective רם, "high, lofty," was very soon improved to the more high-sounding אדר, "glorious, mighty." As for the context of the word in Ešm., line 16, the whole passage (lines 16, 17) runs as follows: "It was we who built . . ."²

Moreover, in רמם the second letter is not מ, but י! These singular variations, with the reading ר for ה in line 4 (see below), and one or two minor peculiarities, seemed to me at first to prove beyond question that Inscription C was a forgery. I am inclined now to think that even such blunders as these may have been possible for a Phœnician stone-cutter. My copies of B and D (untrustworthy, to be sure) both give שממרם.

¹ Compare the use of this adjective in Ešm. line 9, Ma'sûb lines 6.

² The variation between צרן ים and ארין ים, in these same inscriptions, is a somewhat similar case.

the temple of 'Astart in Sidon-on-the Sea, and who made 'Astart to dwell in שָׁמַם אֲדָרָם; and it was we "who built a temple to Ešmun in the mountain, and made him dwell in שָׁמַם אֲדָרָם." At first sight, one temple only seems to be thought of in line 16, as only one is intended in line 17; and in that case, שָׁמַם אֲדָרָם could not be the name of the hill-district. But the wording in line 16 is not quite parallel to that in line 17; notice the repetition of the name 'Astart. It is more probable that *two* temples are intended in line 16, one in the sea-district and another in the hills overlooking the city. Recollect that the mother of Ešmun'azar was a priestess of 'Astart; it must be borne in mind also that the verb שָׁב in such passages as these may be a technical term referring to some special ceremony, which might have the nature either of the dedication of a new building or of the re-dedication of an old building. In view of all these facts, it seems to me that no other theory can hold its ground against this one, that שָׁמַם אֲדָרָם and שָׁמַם רָמָם are merely slightly differing forms of the same phrase, which is everywhere to be regarded as the proper name of the hill-district included in the city of Sidon.'

אֲרִיז רֶשֶׁף, "The District of Rešep (or Rešūp)." If the designation אֲרִיז רֶשֶׁף included merely the cape where the modern city stands, it is easy to determine the position and the approximate limits of the אֲרִיז רֶשֶׁף. It could only be the region lying east and north of the cape, the strip of nearly level plain between the mountains and the sea, running northward perhaps as far as the Auwaly river.* We should then have three districts which are topographically very well defined, and which would comprise all the territory that we know to have been

* Why the word שָׁמַם should have been chosen, in naming this district, it is perhaps useless to conjecture. Flights of fancy are not easily followed. But the use of the adjective אֲדָרָם seems to show that the meaning of שָׁמַם in the phrase was neither simply "skies" nor "heights." Perhaps the region was thought of as being in an especial degree the 'abode of the gods.' It would be strange, indeed, if it had not contained a number of conspicuous temples. And finally, it is quite possible that the designation was very short-lived, and employed in its day chiefly by the members of this royal family.

* This region is now occupied, for the most part, by the famous orange groves of Sidon; but traces of the old city are still to be found, here and there, if the spade goes far below the surface.

included in the city proper. The plain to the southward seems to have been used only as a burying-ground. It is, of course, possible that the term **צדן** [ארץ] **ים** included more than the cape; on this supposition, any attempt to determine the limits of the three districts must be fruitless.

כזרן. The crack passes directly through the letter **כ**, so as to efface the perpendicular stroke across the top line. I have therefore marked it with a dot, although the reading is practically certain.

משל. Of the two dotted letters, the first is entirely gone, but the hole in the stone is of such a shape and size as to show that the missing character must have been either **ש** or **ע**. The **ל** following is practically certain, for the horizontal line, with the angle at the left, remains distinct, and it is quite plain that the letter was not continued downwards. My copies of B and C both read **של** here; in D, this part of the inscription is missing. Compare the use of **משל** (participial noun, as here) in Eshm. line 9. The word is evidently to be connected with the preceding, not with the following; **אש כן** begins a new clause. The preposition **כ** in **כזרן** (line 2), whose force extends also over the following names of the Sidonian districts, may be either the preposition of place, "ruler in Sidon-on-the-Sea, &c.", or the complement of the verbal idea, "ruling over" these districts.

כן. My copy of C reads **ע** in the place of these two letters, and this reading seems to be confirmed by the squeeze. But the squeeze is quite untrustworthy at this point; and as my copy was made from memory (see above) and before I had translated this part of the inscription, the variant reading deserves little confidence, especially as both letters are perfectly plain on stone A.

Line 4. **כזרן נשר**. On the form of the **כ**, see above, page 160. In what follows, **ד** might be read (twice) instead of **ר**, but no plausible reading would result, so far as I can see. On the other hand, the comparison of this temple, perched in its commanding position on the spur of the mountain, with "the eyrie of an eagle" would be a happy one, though something of an exaggeration. **צר** is probably **צור** (or **צ'ר**), "rock," so that **צר נשר** is the rock or crag where the eagle dwells.

הבת. The letters are somewhat widely separated, but all three are very distinctly legible. In place of the **ה**, Inscription

C gives distinctly and unmistakably ר, the upright stroke of the character being unusually long.

בן. If I have divided the text correctly, this word begins a new clause, the preceding noun בת being the direct object of the בן at the end of line 3. The object is then understood with the verb in line 4. Inscription D ends with the words אית הבת; which stand at the beginning of line 3 (the preceding words, in the second half of line 2, are missing; see above).

לאלי. The ' is hardly legible. All this portion of the stone is very much weathered.

Line 5. [לאשמ]. The ש is almost entire, and the upper part of the מ is preserved; both letters are unmistakable. The remaining space at the beginning of the line was of course occupied by the two characters לא.

שר קדש. An accident to the stone has somewhat obscured the lower part of the ק. שר is probably שר, "lord," though the word has not been found elsewhere in Phoenician inscriptions. קדש might be either adjective or noun (as usually in Hebrew), but is probably the former, whose plural occurs in the expression אלנם קדשם, "holy gods," Esm. 9, 22. Finally, the whole phrase, לאשמ שר קדש, finds an extremely interesting and important parallel in the passage Esm. 17, where the reading given by Lidzbarski (*Handbuch*, p. 418) is לאשמ ד-קדש. It would be obvious, even without further evidence, that the Bad-'Astart inscription furnishes the true reading of this hitherto doubtful passage; there is, however, additional evidence sufficient to prove not only the identity of the two phrases, but also to show that one and the same temple is mentioned in the two passages, as will appear in the sequel.

Several noteworthy verbal coincidences with the Esmun'azar inscription have been pointed out in the preceding pages; and when it is remarked in addition that king Bad-'Astart styles himself a "grandson of Esmun'azar," בן אשמנעור, the probability becomes very strong that we have found a new member of the famous dynasty. Fortunately, however, the evidence is such as to lead to much more definite conclusions, and the value of the new inscription is enhanced accordingly.

As has already been observed, above, it is the passage Ešm. line 17 which affords the all-important point of connection with our inscription. The full text of the passage is as follows: **ואנחנו אש בנן בת לאשמן שר קרש ען ירלל בהר וישבני** ; **שמש אררם** ; "And it was we who built a temple to Ešmnu the Holy Lord, by the spring **ירלל**, in the mountain, and made him to dwell in [the district] **שמש אררם**." The detailed manner of the description of this particular temple is noticeable; and it is a fortunate circumstance for us, for it enables us to recognize with certainty in this house for Ešmnu, of which the queen-mother Em-(or Am-)Astart, speaking for herself and her dead son, says, "we built it," the very same temple whose ruin now stands on the hill above the Anwaly river. The coincidences already noticed, that the temple was in each case "in the mountain" and dedicated "to Ešmnu the Holy Lord," might not be sufficient of themselves to put the identification beyond question; but when the remaining item of the description, the mention of a "spring" (**ען ירלל**), is added, the proof is quite conclusive. There is only one spring of any importance in all the mountain district adjoining Sidon, and that one is on the hillside near the Bad-'Astart ruin. It is about two hundred yards distant, in the direction of Sidon, in a recess of the mountain slightly below the level of the temple, and in full view from it. The fountain itself is now quite concealed from sight, for it lies well below the surface of the ground, and its waters disappear at once, but reappear a dozen paces to the northwest, where the mouth of a tunnel, now hidden by bushes, is seen in the hillside. From this point the waters are led by a remarkable subterranean aqueduct straight through the mountain to the gardens of the city.'

¹ I could see nothing to indicate that the fountain itself had its origin in a similar tunnel-aqueduct, but this may possibly have been the case, water being conducted hither from some point on the Anwaly far to the eastward. Supposing this to have been true, the present argument would not be affected, for the juxtaposition of artificial spring and temple would be the best of evidence that the aqueduct was of Phœnician origin. It may be that the problematic **ירלל** contained some reference to this most important bit of engineering. Is it not possible to fall back on the Arabic **قن**, "lead, conduct," and interpret **ען ירלל**.

The temple on the "Bostrenus", then, is included in the list of buildings claimed by Em-'Astart and her son. It is of course beyond question, however, that Bad-'Astart, and not Ešmun-'azar II., was the one who built the house; or rather,—to speak accurately,—that he was the one who *began* the work and carried it on for some time, whether he finished it or not. It follows, that the reign of Bad-'Astart came between those of Tabnit and Ešmun-'azar II.; in all probability, his was the only reign in that interval. The time during which he occupied the throne must have been brief, probably only a few years, for we know that Ešmun-'azar was quite young (perhaps a mere boy) at the time of his accession. It is perhaps most likely that Bad-'Astart was the elder brother of Ešmun-'azar, though he may have been his half-brother, and possibly was not the son of Tabnit at all.¹ Supposing him to have been the son of the last-named king, we should gain at least one more bit of information as to his personal history. King Tabnit himself died in middle life;² and even his eldest son must have been a young man at the time of the father's death.

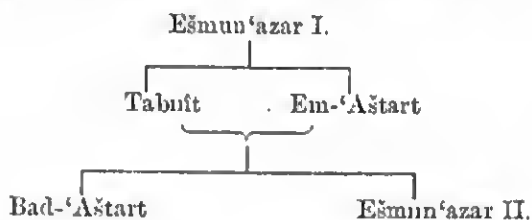
"fountain that is conducted," "conduit-spring"? We could then compare the name of the Jerusalem aqueduct, שֶׁלֹחַ.

¹In this case, the fact that Bad-'Astart omits the name of his father in the inscription would receive a probable explanation, namely, that the latter never occupied the throne.

²As the evidence on which this statement rests is not generally known, I subjoin it here: When the sarcophagus of Tabnit was exhumed, in the year 1897, and the lid was removed, the body of the king was found to be in a very good state of preservation. It was lying in a brownish-colored, somewhat "oily" fluid, which nearly filled the sarcophagus. The eyes were gone; the nose, lips, and the most prominent part of the thorax, which had not been covered by the liquid, had decayed away; in other respects, however, the corpse was like that of a man only recently buried. It was but slightly emaciated; plenty of flesh remained on both face and limbs, and the skin was soft to the touch. The vital organs and viscera had not been removed (a noteworthy circumstance), and were perfectly preserved. Dr. Shibly Abela, of Sidon, a physician of education and experience, remarked that the face showed traces of small-pox; it was not apparent, however, that the king had died of that disease. The color of the skin was described as somewhat "coppery," the tinge being perhaps due to the influence of some substance, or substances, held in solution by the enveloping fluid. The fluid itself may have been partly, or even wholly, rain-water, which finds its way into most of the tombs about

As for the assertion of Em-'Aštart, "We built" the temple, it may be explained in more than one way. This daughter of Ešmun'azar I., and priestess of 'Aštart, may well have coöperated with the young king Bad-'Aštart in this undertaking (especially if he was her own son), or even have been the moving spirit in it. More probably, however, the words of the epitaph are literally true, the fact being that Bad-'Aštart died before the work was finished, whereupon the queen-mother and her son completed the building and inducted the god Ešmun into his new abode.

The genealogical table of the Ešmun'azar dynasty, as now known to us, would therefore have the following form :



It is an interesting question, whether the name of this same king Bad-'Aštart is known to us from any other source. Neither one of the two kings mentioned by Greek writers under the name "Strato" (*Στρατών*) can be thus identified. The first of these was the well known friend of the Athenians, who reigned in the first half of the fourth century B.C. The length and character of his reign would ill accord with what we know of the brief career of young Bad-'Aštart. The date of this

Sidon; but in any case it is evident, from the facts just given, that the body of the king had been skilfully embalmed. I do not know that any similar case has ever been observed and reported. After the body had been removed from the sarcophagus and exposed to the sun, it decomposed and shrunk to withered skin and bones in a very short time.

My chief authority for these facts is the Rev. William K. Eddy, of Sidon, a keen observer and cautious reporter, who was one of the few who saw and touched the body of Tabnit when it was first exposed to view. Mr. Eddy was positive in his opinion that the king, at the time of his death, had not passed middle life; the face, he thought, was that of a man of less than fifty years of age.

Strato, moreover, is probably more than half a century earlier than that of the Ešmun'azar dynasty—though this is a matter still in dispute. And finally, if the Delos bilingual inscription (*CIS.* I 114) can be admitted as evidence,¹ the Phoenician name, of which Σράτων was the accepted Greek representative (not 'corruption'), was in this case not *Bad-'Astart*, but *'Abd-'Astart*.

The other "Strato" named by the Greek writers is the monarch who was reigning in Sidon at the time when Alexander the Great invaded Phoenicia, and who was deposed at that time. It is plain that this king, also, may be left out of account here.

In the Phoenician inscription *CIS.* I 4, on the other hand, it is quite likely that we may recognize our temple-builder. The inscription is that of a Sidonian king *Bad-'Astart*. The stone containing it is now in the Louvre. The text runs as follows:

בִּירַח מִפֶּע בִּשְׁת מִלֹּחַ
י מֶלֶךְ בֶּר עֶשְׁתֶּרַת מֶלֶךְ
צִדְנִם בֶּן בֶּר עֶשְׁתֶּרַת
מֶלֶךְ צִדְנִם אֵית שֶׁרן אֶרֶץ
- - ז לֵאלִי לַעֲשֶׂתֶרַת

Passing through Paris in the summer of 1901, I had an opportunity to re-examine this inscription with some care. All of the letters in the transcription given above are quite certain, with the possible exception of the *z* in line 5. The *l* in line 1 has been broken away, but can be supplied with certainty. Of the seven or eight other letters of the inscription which are more or less obliterated, each one is placed beyond the reach of doubt by the traces which remain² or by the context; in almost every case, the evidence of both kinds is quite satisfactory. In the lower right-hand corner of the stone, a large piece has been broken away, and the gap extends into the beginning of the fifth line. At the very beginning of the line, before the letter *z*, there is space sufficient for two letters; too large a space for a single

¹ It is at all events the inscription of a Phoenician king, named *עֶבֶר עֶשְׁתֶּרַת*, who was friendly to the Greeks, and lived in the fourth century B.C. (judging from the Greek palaeographical evidence).

² The portion of the letter *z* which remains at the end of line 4, for example, could not possibly be a part of any other character.

letter (judging from the seal of those adjacent), and not large enough for three. The editors of the inscription in the *Corpus Inscriptionum Semiticarum* have adopted the strange conclusion that *no letters* ever stood in this space; the main reason for the conclusion being evidently this, that their translation would admit of no word between ארן and י. But the traces of at least one letter can be seen with perfect distinctness, and I think it is hardly claiming too much to assert that parts of two letters can be made out. The character at the left is apparently מ. The curve at the end of the top stroke can be seen distinctly in the photograph published in the *U.S.* The top of the vertical stroke at the right is also plainly visible; and the manner of the break between these two points suggests the top of the vertical cross-bar. Just at the right of this letter there appears a bit of nearly horizontal line, curving slightly downward at both ends. This might be the top of any one of the letters ב, ד (or ר), י, ץ, פ, or ק. All of these traces are to be seen in the photograph just mentioned (as any one can satisfy himself), and I made sure by repeated examination of the original that in every case we have to do with lines carved by the stone-cutter, not with mere accidental abrasions. In my own opinion, the missing word is ם, and I would translate the whole inscription as follows:¹

"In the month מנע,² in the year of the accession of Bad-ʿAstart, king of the Sidonians; for that (or, when) Bad-ʿAstart, king of the Sidonians, built this column (?) of the Sea-District in honor of his god ʿAstart."

I have ventured to explain the difficult word שרן (line 4) by the Assyrian *šurinnu*, which appears to mean "column, pillar";³

¹ As my translation differs at several points from the one given in the *Corpus*, I append the latter: "In mense . . . in anno [regn]i regis Bodastrati, regis Sidoniorum, [dicavit] Bodastratus, rex Sidoniorum, plantitum terr[ae] [hujus] Deo suo Astartae." "Dicavit" is the translation of a supposed verb כבן.

² It is barely possible that this word should have one more letter; there is room for another character at the right, and the stone is somewhat broken away at that point. In all probability, however, the gap was left because of the imperfection in the stone.

³ The attempt has often been made to explain both the שרן of this inscription and the Assyrian *šurinnu* by the aid of the word אֲשֶׁרְנָה, Ezra 5:8. But the latter is merely the result of text-corruption, as the old

see Delitzsch, *Handwörterbuch*, s. v. It is plain that the structure which was "built" in this case was not a temple of any kind. The king, who had only just come to the throne, had not had time for any such building operations; moreover, the word **בֵּת** would then certainly have been used. But the erection of a pillar, or monument, to 'Astart would be a very natural proceeding on the part of the newly-crowned king. This monument, apparently in distinction from others already existing, is spoken of as that "of the sea-district." If my restoration of the text is correct here, we have a third form of the name of this district, **יָם אֶרֶץ** standing side by side with **יָם צֶדֶן** and **צֶדֶן אֶרֶץ**.

There is of course nothing in all this to prove that Bad-'Astart the grandson of Ešmun'azar is the one named in this last inscription. The identity of name, however, combined with the slight verbal coincidences, the honor paid to 'Astart at the beginning of the reign, and the palaeographical evidence, which would assign the inscriptions to approximately the same date, may be said to render the identification probable.

If the sarcophagus of King Bad-'Astart should at last come to light, we have reason to hope that it would give us new and important information regarding this royal family. Both his predecessor and his successor on the throne were buried in Egyptian sarcophagi furnished with Phœnician inscriptions; and it is an interesting possibility, or even probability, that somewhere in the neighborhood of Sidon another of the same kind is hidden away—unless, indeed, the fragment described by Clermont Ganneau in his *Études d' Archéologie Orientale*, i. 91 ff., came from the sarcophagus of this king.

There is new light to be expected from still another source. In the summer of 1901, the temple-ruin on the Anwaly was partially excavated by Macridy Bey, of the Imperial Ottoman Museum. Because of the very limited time, as well as limited

versions prove. The Greek of our canonical Ezra renders by *χορρυία* (= **חֹרְרִיָּא**), while the Greek First Esdras has *στέγη* (= **סְטַגָּה**). It is thus evident (though the evidence has been overlooked by all commentators and critics, so far as I am aware) that the original text had **חֹרְרִיָּא**. 'roof.' The **רִנָּה** following was responsible for part of the corruption, which was taken over from verse 3 into verse 9.

funds, at his disposal, he could undertake nothing beyond a sort of preliminary examination of the ruin; this, however, as I have heard, was thoroughly and skilfully conducted. It is to be hoped that the results of this trial excavation may soon be published, with a full description both of the building itself and of the many and various objects—among them a *sixth* stone bearing the same inscription as the others—which were found. It is also very much to be desired that the whole site be thoroughly excavated, and that means be taken to preserve in as good condition as possible this sole surviving temple of old Phœnicia.

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